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# The Sources of Therapeutic Advance

THERE is no intolerance comparable to that manifested by the men who should be the most tolerant of human beings, the highly educated scientists. But that is because education will not alter the nature of man or develop the human mind beyond its possibilities of development. Only the very few, the greatest intellects, the profoundest scholars, reach that point where they appreciate the trifling nature of human knowledge, its relative insignificance, its shifting character, and the absurdity of argument based on its assumed completeness.

Why demand of our neighbor allegiance to a creed that we know is only today's attempt to crystallize truth, which the sun of tomorrow will light up at another angle so as to make it appear quite different? The pious Moslem proclaims that Mahomet is God's prophet, which the pious Jew denies; yet why fly at each other's throats over it, when both are right, each as concerning himself? Christians deny and Buddhists assert the godhood of Gautama, and yet the former appreciates the divine truth of the Indian sage's dying words—"Be kind to all that lives"; and his followers recognize the same spirit in him who told the criminal to "go and sin no more."

The level of human thought and morality rises. We have come to the point where intolerance has cooled, where the sectary is learning to see the good in others and to suspect the evil in himself. Orthodoxy is adjustable, and people question why sameness of belief should ever have been considered desirable.

Time was when the Regular Medical Profession held stiffly to its limits, and refused to consider the possibility of fellowship with aught outside the lines, or to believe any good could possibly come from external sources. The greatest obstacle to vaccination was that it was discovered by the milkmaids—illiterate creatures, wanting the scholastic degrees. Hydropathy, as represented by the "water-cure," where people dressed outlandishly and dieted to suit their condition, electricity, massage, vibration, psychotherapy, all was arrant quackery. All these non-drug methods were beyond the pale, and the regular doctor who dabbled in them lost caste. The same was doubly true of proposed reforms in drug-therapeutics, such as homeopathy and Thomsonianism. They were to be let alone.

Sometimes, with a brave show of dispassionate stooping to consider the trifles that agitated the laity, we condescended to examine their claims, but it was only to condemn—as when a great therapeutist undertook to investigate hamamelis, a drug

depending for value on a volatile constituent, based his examination on the dried herb, and haughtily pronounced it inert! Woe to him who dared find any good in such irregular suggestions; he was recognized as badly tinctured with quackery, and the whisper went round that he was dangerous, and to be avoided.

How completely all this has changed. Nobody stops to bother over the beliefs of the other fellow, and his peculiarities of practice interest us only in so far as we may pick up something good from him. We care not a picayune who advances a novelty in therapeutics, but only as to whether it is a good thing.

Dr. William H. Welch, of Baltimore, says:* "Observation and experiment are the warp and woof of the fabric of scientific medicine, the one as necessary as the other. While we know, as all men of science must know, that there can be no dogma, principle, system or method universally applicable to the treatment of disease, we are aware that new knowledge may come from the most unpromising sources, and we are eager to discover what good there may be in the claims of the advocates of any peculiar system of treatment; and, if such is found, there is nothing whatever in our principles to prevent us from adopting it, or, in fact, from employing any method of cure which the physician may deem best. We have no intention or desire to interfere, even if we could, with the freedom of the individual to employ any one or any method of healing he may please so long as the interest of the public health is not endangered thereby."

The great Johns Hopkins internist voices the view of the medical profession today, and he does it with dignity and forbearance. He does not even so much as hint that persons who do not know that there is such a thing as a suprarenal gland, who could not distinguish a neuron from an ion, are scarcely likely to make any strikingly important discoveries in therapeutics. He does not say that all over the world men thoroughly versed in modern science, and thoroughly equipped with modern means of research, are striving feverishly to learn some new thing, however trifling, that will add to the sum of the profession's knowledge and confer some fleeting honor on the discoverer. One of the leading surgeons of Philadelphia owes his rise to the suggestion that a little tartaric acid should be added to sublimate solutions to hinder precipitation by albumen. It takes such little things to bring honor to a doctor among doctors. The outsider claims that he cures cancer!

When a layman announces a novel means of cure, excitement is aroused and the crowds flock to him. Miracles are declared. Then doubts arise, the matter is hotly debated, failures multiply, and in no very long time the matter is forgotten. Meanwhile, much-derided Regular Medicine takes up the matter, studies it, separates the psychic from the somatic effects, and establishes the exact value of the remedy and its limitations, or rejects it as a baseless delusion. The magnificent development of electrotherapeutics is not due to the people who first went about giving shocks to everybody who would take them, but to the trained scientists who took up the matter and tested it, extended it, and placed its uses on the firm foundation of truth.

Meanwhile the public has been running after a thousand and one other suggestions, taking up each, solely because it was the latest.

*Virginia Medical Semi-Monthly, 1911, July 7, p. 174.

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There is comfort in decision, and one matter settled is worth a dozen under consideration.

—Dr. E. S. Goodhue.

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## NEGLECTED OPPORTUNITIES

What dubs these advertisers are! There they go right along in the old rut, doing things that have been done so many times that the ideas are worn threadbare, and all they have to do is to lift up their eyes and look, and there are new opportunities within reach.

Take this matter of advertising in street-cars. Coming to the office in a Lawrence Avenue car (Oh! you every half hour!), we noticed twenty-six advertisements decorating the spaces above the windows. Of these no less than ten were

articles of diet. On a cold morning like this they read mighty impressingly; but what is the use! By the time we are safely ensconced in our warm office we forget all about the ads we saw in the car.

Now, why don't the enterprising advertiser establish penny-in-the-slot machines, by which when one reads of Hooker's delicious chocolate, or of Hank's coffee, Bomino sugar and Gorden's milk, a cup of the steaming beverage may be forthcoming? That is the time it is needed and would be appreciated, and the remembrance of the warming, invigorating beverage would be so deeply impressed upon the mind of the enjoyer, that the pleasantest memories would henceforth be associated with that particular brand, when you need a cup of something of the kind, and possibly a biscuit attached. Then even that delicious little end of nothing whittled down to a point, a Nabisco, might be nibbled appreciatively by our fair fellow passengers.

There is a tremendous lot of money wasted by advertising a thing just half way. Concentrate the expenditure in half the media, and then do it right, and the results would be commensurate with the thought expended upon it.

Possibly the street-car magnates, if properly approached, might see how much to their advantage such a luxury would be, and be disposed to meet the advertiser half way in the matter of expense.

## MUSICOTHERAPY

In a recent issue, *The Denver Post* says that a female lady doctress of that city predicts that music will, in the near future, be utilized as a remedy. Physicians will prescribe liberal doses of "Die Walkuere" for insomnia, and so many acts of "Goetterdaemmerung" for the hysteric, scenes from Lohengrin for headaches and neuralgias. The phonograph will replace the drug-store, and the German synthetics be relegated to their native scrap heaps. An admirer of Wagner in Munich has opened a sanatorium where patients are treated by selections from the works of the great master, and trombone and bass viol, flute and violin replace physician and nurse, diet and drug.

As to hysteria, we have heard more than one badly perturbed doctor mutter something that sounded like the name of the opera mentioned, but it seemed rather an invocation—perhaps an imprecation—than a medical prescription.

This matter is not original with Doctoress Cherry of Denver, or for that matter with Dr. Riverra of Munich, for that singular genius, Ephraim Cutter, advanced the claims of musicotherapy many years ago.

The trouble with these people is that they do not claim nearly enough for their pet method. We know many men, and even a few women, who will be willing to take their affidavits that some of Wagner's music will do more than cure disease—it will remove the fear of death. Just get a performer who has not had much musical education, but is imbued with the idea that it is "swell" to admire Wagner, and let him play persistently and indefatigably, and the time will surely come when the patient will "welcome death as a relief."

**Modern drug medication is so simple that it bewilders the men who are used to give compound prescriptions and have no better means of judging effects than the recovery—or death—of the patient.**

## WATER DRINKING IS LEGAL IN OHIO

I recently made a railroad trip from Chicago to New York, going through Illinois, Indiana and Ohio by daylight. In the two former I found some difficulty of getting a drink—that is, of water. In these two states, since the public drinking-cup was abolished by law, no provision whatever has been made for those who prefer cold water to other beverages. In Ohio, on the contrary, every ice-water cooler has its cup, and the thirsty passenger may partake of the refreshing beverage as often as he pleases.

While the train was whirling through Indiana and Illinois it was noteworthy that the Pullman cars were almost completely emptied of their male population. There was a perpetual pilgrimage, among the gentlemen, to the buffet car, where there was said to be "something to drink"—not

water. In this part of the train paper drinking cups were not required, and the method of sterilizing the glassware seemed rudimentary, yet there seemed to be no fear of germs.

Query: Is the health of the traveling water-drinking public really safer in Indiana and Illinois than it is in Ohio?

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The tumblebug that rolls the ball
  Along the path no doubt
Supposes that the heavens would fall
  And all the stars go out
If he should cease to roll away—
He only sees his lump of clay.
There's many a man who, in his pride,
  Thinks all the wheels would stop
If he should some day step aside,
  Permitting things to drop:
The man who thinks he does it all
Is like the bug behind the ball.

—S. E. Kiser.

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## MOTION AND REST

Never before in the world's history has there been a time when such turmoil and restless movement was manifest. In every line of human endeavor the same story is told, of such a pushing, and squeezing, and scrouging, and bullying, and bluffing, and fighting, and grabbing, and struggling. The hurly-burly of the stock exchange is paralleled in every vocation where two men want the same thing—and there is naught worth the having but at least two are trying to get it.

The consequence is: harder work, more strenuous effort, deeper planning, more foresight, greater care, and success (sometimes) to the one who best deserves it. Through it all, therefore, comes Progress, as the greater effort means greater achievement. Truly did Spencer see the truth, that the existence of animals of prey benefited the herds and flocks of the grass-eaters, as they learned to be more wary and strong, to fight when they could hope to win, and to run when they were the weaker. The keener and swifter survived, and the grade was thus raised.

Man is incomparably the chief among animals of prey; and like the four-footed wolf he does not hesitate to prey on his own kind if they offer an unguarded opening. Take care, be wary, and heed your steps; for woe comes on a false one.

Things move rapidly. The man who says a thing can not be done hears the next moment that someone has done it. Lardner wrote an elaborate paper to demonstrate that no ship could possibly be built that could carry enough coal to cross the Atlantic under her own steam. Nowadays steamers leave Great Britain with the coal for their return trip, because it is cheaper to carry it over sea than to buy it here. Men positively asserted that railroads, telegraphs, telephones, and every other great thing, were impossible—yet they came. Not long ago they said men would never succeed in flying—but they do fly.

Is there no such thing as rest? Not in the current. The moment you cease to move you become an obstruction. If you must rest, swing aside into a quiet eddy and let the swift rush go by you. Get back to the farm, and behold, Science is even there, and demands the same output of brain and muscle as does the Exchange.

I heard a man's story. He was sick, nauseated, his stomach gone back on him, sleepless and weak; unable to work, to enjoy or to rest. I looked over his gaunt, muscular frame, with the build of an athlete, and said:

"You take absolutely no exercise."

"Right."

"Does it strike you, as a physician, as probable that you, with such a muscular development as you have, with the history of hard work as a youth and a notable college athletic record later, can absolutely ignore exercise and let your muscles go to waste, without suffering in your general health? Must not a man use the muscular endowment he has to keep well?"

He admitted that it did not seem probable, and that he should use that splendid body as its Maker designed. He would rise an hour earlier and ride. No, that would simply add to his debility by adding one more element of exhaustion. When one rests he should rest; not add more work. He should go to the earth like Antaeus; take a week in the country where eyes and brain rest while body exercises exactly as much as seems good each day. If at the end of the week one is able to do more

without fatigue than he could on the first day, the prescription has approved itself.

That is a rest in the eddy. Then a dash back into the swift current and those who have remained there after the arm grew too weary to fight will find another sort of an antagonist in the rested man.

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**What a simple thing it is to watch the action of a remedy in the patient's symptoms and to note the exact effect we want, and then continue just dose enough to sustain the effect where we want it.**

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## A STUDY OF SOME HEART STIMULANTS

In *The Lancet-Clinic* of January 27, 1912, F. C. Askenstedt gives some very interesting studies of socalled vascular tensors.

His first case was one of arthritis deformans: the pulse, systolic and diastolic tension were taken, then atropine sulphate administered hypodermically in full dose, 1-100 grain. Following this, in less than ten minutes the systolic and diastolic tension, also the pulse were lowered and the latter slowed. In one hour the pulse had been restored, but in two hours systolic tension was still considerably below the starting point.

Taking a patient with articular rheumatism, the vascular tension was 120; glonoin, 1-50 grain, was administered hypodermically; in three minutes the tension had fallen to 103, the pulse rising from 91 to 96. In thirty-five minutes the tension had not been regained. In another experiment strychnine failed to increase the blood pressure and seemed in no wise to hinder the dilating action of glonoin upon the capillaries.

In still another experiment atropine did not materially affect the systolic or diastolic tension or the pulse; the dose being 1-100 grain hypodermically.

In a case of mitral regurgitation with falling compensation the hypodermic injection of atropine sulphate, 1-100 grain, was followed by a reduction of systolic tension from 210 to 162. Adrenalin reduced the tension from 113 to 104, after a preliminary increase to 130.

In a case of Hodgkin's disease adrenalin raised the tension from 92 to 102. In Hodgkin's disease suprarenalin lowered the tension from 100 to about 80, after a preliminary rise.

Summing up his experience, Dr. Askenstedt says that strychnine, 1-30 grain, was used nine times, six with low-blood-pressure, twice with normal, and once when it was high. In seven cases there was no noticeable effect upon the rate or the character of the pulse. In one there was a rise in the pulse rate, in another a fall. In no case did blood pressure rise. In one case of high pressure, one of normal, and one of low, there was a slight fall in each.

Atropine, gr. 1-50, was given hypodermically in a case of high blood tension, 1-100 grain in one of low tension, and twice to a patient with moderately high pressure. In the latter it produced a marked lowering of pressure, but no influence on the frequency or character of the pulse. In a case of moderately high pressure the pulse and tension were reduced. In one of low tension no effect was observed. Atropine was administered in doses of 1-50 grain ten times, five where the tension was high. In one case of high tension 1-25 grain was given. In every instance it lowered the blood pressure, this effect lasting from one hour to one and one-half hours, the reduction being 20 to 25 millimeters. In cases of high tension the influence on the heart was not well marked, but a slight reduction in the pulse-rate was noticed. In one case rapid sinking of pulse-rate and tension took place within five minutes, but this was but of a few minutes' duration. During this period the ventricular contractions were increased in force. It is evident that this drug, in cases of decidedly low tension, is perilous.

The power of strychnine, atropine, and digitalis to contract blood-vessels and increase blood pressure was not manifest in any of these cases. It is commonly observed in experiments upon animals. After suprarenal extract the tension rose promptly and powerfully for a brief period.

The article ends as follows:

"The paucity of results obtained at the bedside from our reputed heart stimulants, compared with the definite action of these remedies in experiments on animals, may be attributed to a lessened response of

tissues that are diseased, to a much smaller dosage employed therapeutically, and to biologic differences. Admitting that the observations of drug effects upon man do not permit of the precision possible when experimenting upon animals, and admitting certain deficiencies in technic and equipment in the examination of this series of cases, it does seem, nevertheless, as though in transcribing the lessons from the experimental laboratory into the practice of medicine too much has been taken for granted."

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**My message in its fashion shall be an appeal to enthusiasm in things in life, a cal to do things because we love them, to love things because we do them to keep the eyes open, the heart warm and the pulse swift as we move across the field of life.**

**—David Starr Jordan.**

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## THE LOG OF THE EASY WAY

Several years before Dr. Waugh took the trip described in "The Houseboat Book," John L. Matthews had preceded him. Mr. Matthews was a writer, a newspaper- and magazine-man, and in 1900 built a shanty-boat and in it voyaged from Chicago to New Orleans. The romance of it was that his was a wedding trip, his crew consisting of a bride annexed the day of sailing, or rather drifting. Some accounts of this voyage got into the Sunday papers, but not until 1911 was the log of the trip put into print, the publishers being Small, Maynard & Co., of Boston. This book forms a neat octavo volume of 268 pages, and is embellished with 24 illustrations from photographs taken during the trip. The price is $1.50 net; $1.62 by mail.

Why didn't I write that editorial last night? Why was I so late getting up this morning? Well, the truth is, after dinner I picked up this Matthews book, and laid it down after I had read the last page some time this morning. *Hinc illæ lacrimæ*—and the ruffled feelings of the spouse who perforce was kept from sleeping.

What a charm it has! The new experiences—the boat home—the river—the people—the shanty-boaters—the shanty-women—the rascals—the winds—the hard work—the wolfish appetite—the digestion—the privations—the wet—the sunny days—the quiet drifting—the driving rain—the stocking up with wood—the mooring in cosy nooks—the evil-faced men—the big-hearts—the trades—the lonely landings—the caricatures on towns—the levee camps—the struggles with elemental forces—the happy days—the good eats—the hardening muscles—the primitive men and needs—the lawless laws—pecans—persimmons—possums—razorbacks—and, always growing on one, the great, huge, relentless, half-slumbering river giant, "the lure of the great river. The first year you don't like it very well, but you think it's easy. The second year you have your doubts about how much the river could do to you if it tried. The third year you're in love with it, but you ain't got no doubt you're afraid of the river every minute, sleepin' or wakin'."

Is life growing tedious? Are you city-tired, or brain-weary? Do the things for which you live lose zest, and is *ennui* bedeviling you? Blood getting thick; ashes accumulating; find yourself muttering, "What's the use?" Just send for the two books—the "Log of the Easy Way" and "The Houseboat Book"; and the rest does itself. You'll go.

'Fraid of the monotony? Don't worry. *Monotony!* Say—can you saw, chop, cook, test water, caulk, pitch, pay sail, hear in your sleep, awake on need, swim, shoot, fish, pole, loaf, swear, fight, run, jump, work, bargain, and do any one of a hundred other stunts that are going to be yours, on the moment; command respect and liking of men; soothe an angry man with a gun, whose hogs are being shot by other shanty-boat men; refuse a thirsty outlaw whisky without hurting his feelings; decline to trade your boots and gun for a woman who mistakenly thinks she fancies you more than her present man?—oh—*monotony!*

You go to rest securely moored to the bank, the river mild as new milk, the sun setting romantically, the zephyrs of spring blowing gently—and next minute, as it seems, you are awakened by a sudden upheaval of your boathouse, your crockery crashing, loose things falling, boat bumping—is it a hippo underneath? Oh no—it's only the Gray Eagle going by.

Danger? Now, if you are a mollycoddle, stay home. Don't think of a houseboat trip. If you take your wife along, better have a couple of men in the party, although Matthews got along with only the two of them. But the dangers are of the sort a man can foresee or meet—and he may reasonably expect to cope with them. Many of the perils and most of the inconveniences and discomforts are preventable—and these two books tell one how.

But there is one thing you can not escape—the rest of your life you will hear the voices of the river, will know its slumberous majesty, see its swirls, its waves, its whirlpools, will feel the pull that draws you to its embrace. You will dream of its rushing floods. You will know what Wagner meant when he put the Rheingold into music.

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I should never license a gruff doctor if I had licensing to do. He has no right to inflict his sombre self upon persons made more than usually sensitive by physical suffering. If the physician cannot be cheerful, pleasant and hopeful; if he can not smile and praise and please, let him do something else—take a job in a telegraph office, for instance.—Dr. E. S. Goodhue.

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## "THE AMERICAN PRACTITIONER"

Dr. J. W. Wainwright has purchased *The American Practitioner and News* of Louisville, Ky., and *The New England Medical Monthly* of Boston. These he is combining into a single journal entitled *The American Practitioner*. It is to be issued from New York City under his management and editorship. The first number is due in March.

This is a move in the right direction and by the right man. Dr. Wainwright is too well known as an editor and author to require an introduction. There are a good many other journals which are too good to be allowed to fail, and not good enough financially to sustain themselves in the present era of sharp competition and determined official opposition to anything resembling independence in medical journalism. The combination of such journals into fewer and stronger ones is in every way advisable, especially if the elements of strength which each journal possesses are retained in the combination.

We wish Dr. Wainwright his full measure of success, and know that he will deserve it.

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## LORD LISTER AND HIS WORK FOR HUMANITY

The question most frequently asked of doctors, perhaps, is, "Why are operations performed much more frequently now than some years ago?" The answer to this, properly elaborated, may be divided into three parts, as follows:

First: Many conditions formerly regarded as wholly "medical" or thought to be beyond the hope of cure are now known to be curable by surgical measures. Appendicitis and the presence of gallstones are typical of the first group; various forms of cancer and practically all varieties of tumor belong to the second class.

Second: Diseases formerly not known or only rarely recognized are now easily distinguished by the general practitioner and referred to some competent surgeon for cure, instead of being permitted to run on to a fatal ending under purely medical treatment. As prominently illustrating this type of trouble may be mentioned the different forms of dyspepsia, or "indigestion," due to ulcer of the stomach or bowel—a condition readily relieved by an operation formerly regarded as exceedingly perilous, but now rendered practically free from danger (when not put off too long) through application of the principles first made known by Joseph Lister.

Third: Operations formerly impossible, because of the danger of "blood-poisoning," have been made almost absolutely safe through the discovery of antiseptic agents; that is, recognition of the fact that infection, sepsis, blood-poisoning are caused by minute fungoid plants (called bacteria or germs, or, broadly, microorganisms) introduced into wounds from dirty skin, dirty hands or dirty instruments—i. e., unclean in a surgical sense. This discovery was made by Joseph Lister, the London physician, afterward knighted; then practically unknown in the world of medicine and science, but whose name now has become immortal.

Most people (and some of the old-time doctors) think of germs as "minute animals or bugs." Nothing could be further from the truth, though the causes of malarial fever and of yellow-fever are indeed animal parasites (introduced into the victims by two different varieties of mosquito—and never otherwise); all bacteria, like those causing typhoid fever, meningitis, and consumption, are microscopic plants—fungi—which grow in the blood and tissues of the subjects by introduction through food, air, and other ways, rather than by direct contact. The healthy individual is able to resist these germs, which are everywhere present in the temperate and torrid zones; but one who is weak from poor food, bad hygienic surroundings, and so on, presents less "resistance"—he is a good "soil" for the implantation and development of these fungi.

It was the recognition of the fact, that all "inflammation" depends upon the introduction of pus-producing microorganisms into wounds—accidental or surgical—and that all blood poisoning results from dirt containing these germs, which revolutionized surgery and incited the investigation that promises to banish, eventually, all communicable diseases from the face of the earth. The discoverer of these fundamental facts stands, then, with Columbus, Galileo, and others whose names can never die. Greater, indeed, than any other is such a man, for Lister's revelation of the relation of germs to surgical infections will save myriads of lives during all the coming centuries.

This great Englishman died in February. He was born in Upton, Essex, on April 5, 1827. He was graduated from London University in 1852, receiving the degree of Bachelor of Medicine; later in the same year he was made a Fellow of the Royal College of Surgeons—a great distinction for so young a man. For several years he lectured on surgery at Edinburg, and then removed to Glasgow, where he served as professor of surgery from the year 1860 to 1869, and as professor of clinical surgery, from 1869 to 1877. In the last-named year he was called to London, to become professor of clinical surgery in Kings College, which position he filled until 1892. He was awarded the Grand Prize of the Paris Academy in 1880, and was given the medal of the Royal Society in the same year. He was created a baronet (as Sir Joseph Lister) in 1887, and was elevated to the peerage in 1897, retaining his own name. Thus he became Lord Lister.

No surgeon in the world will say that Lister did not deserve every honor accorded him. As long as time shall last his name will be remembered, and Joseph Lister acclaimed as one of the greatest benefactors the world has ever known. Englishmen well may be proud that two of the greatest medical discoverers of all time have been of their Isle: Jenner, the originator of vaccination, and Lister, the founder of antiseptic surgery.

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**I have a robust faith in the efficacy of the right drug, given to the right person, in the right quantity, at the right time.—Solomon Solis Cohen.**

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## BARNYARD OBSERVATIONS

Observe the cock. How lordly his strut. How stately his mien. How regal in his domination, how jealous of his prerogatives. He is conscious of his worth, and impressive in his dignity. Yet he makes good with it, for he never takes a dare, and is ever ready to fight at the drop of the hat, to protect his domain and his harem To the women-folk of his household he is ever the strict but kindly master, impartial in his ministrations, demanding due deference, exacting full meed of duty, directing their lives with full self-confidence. Withal, a thorough gentleman, never descending therefrom. He scratches about and finds a fat, juicy worm. Does he eat it? Surely not. He calls the hens, who run for the dainty morsel. Time and again he does this until one begins to wonder how many worms a hen *can* eat, and if he never indulges himself; and about then he pecks at a bit of a one, apologetically, as if it were really not worth calling to the hens about.

Observe the hen. Has she any pride or style? Not a bit. She is sordid. Does she politely suggest to her lord that he needs a little nourishment himself, or

thank him for the worm he has proffered? Not on your life; she gobbles it down and looks for more. She has had enough, her crop is so full that any more would annoy her, but she "isn't going to let that hateful little red hen have one if she can prevent it, so there!"

What is her real, low-down, cross-her-heart, opinion of her mate? That he is not as big as the Brahma next door, nor so slender as the game across the way, nor has he a comb as splendid as the Polander, and then those feathers running down his legs are dreadful! Besides, he might find a good many more worms if he tried harder. Then she has a habit of straying aimlessly toward the neighbors' yards, and really courts the enterprise of their cockrels; yet not in a way one can blame so much, for she really did run, and who can prove that she could have run faster if she wished! To tell the truth she is rather proud of having attracted alien attention and been the cause of a scandal and a fight. Luckily for her, she is not judged by the other hens.

Before we judge her, recollect the meaning of her nature, and that in it lies the hope of the future race gallinacean. No plenty of worms, no eggs; no masculine attention, no fertilization, and the future hatch proves sterile. To feather her nest is an integral part of her femininity, and purposeful. Greed and ingratitude, thankless and unlimited exactions from her mate, mean provision for the offspring.

Then, in the last battle the big rooster next yard made a holy show of him; and he should have been quick enough to have prevented the cockerel's raid. Looks as if he were slowing up, and that means more infertile eggs, and deteriorated offspring; and what hen ever could stand for that!

Don't condemn the hen hastily. She has her reasons, or rather her instincts.

## POST VERSUS COLLIER

A good deal of publicity has been given to the fact that, in the fall of 1910, Mr. Robert J. Collier, of *Collier's Weekly*, secured a favorable verdict in a $50,000 damage suit against the Postum Cereal Company, for alleged libel. February 16, of this year, the Appellate Division of the Supreme Court of the City of New York reversed this decision and set aside the verdict.

While no physician can or should indorse the advertising methods at one time employed by the Postum Cereal Company, it has for a long time been apparent to many of us that exact justice has not been done Mr. Post. Whatever faults his advertising may have had, these have been removed. His products are excellent, and in promoting simplicity of diet, and particularly in providing a harmless cereal substitute for the caffeine-bearing beverages he has rendered a commendable public service.

It gives us much pleasure, therefore, to call attention to this reversal of decision, which we hope will be given proper and fair publicity by those who previously have been only too ready to mete out criticism.

The best success for any man is one built upon the successes he has helped other men to attain.—Abbott.

## ARE ALL DRUG MAKERS DISHONEST?

It seems about as absurd to ask this question as to inquire whether all doctors are fools or all lawyers liars. Any man who has a grain of sense can tell us that there are good men and bad men in all professions, also, that even the best of men occasionally make mistakes.

*The Journal of the American Medical Association* has recently printed two short but highly pungent editorials concerning the lately organized National Association of Manufacturers of Medicinal Products, an association which includes in its membership practically every prominent American manufacturer of chemicals, pharmaceutical products and biologic remedial agents. The reader who has no other source of information about this organization than that supplied by the *Journal* could hardly fail to draw the conclusion that the association and all those connected with it are essentially dishonest, and that it was created for the sole purpose of helping the houses represented to make money—no matter how. There is not a scintilla of evidence in this editorial of understanding of, or sympathy with, the fundamental

purpose of this body—which is the promotion of the welfare of an important American industry.

*The J. A. M. A.*, unfortunately, was not represented at this meeting. Therefore its attack upon it is based purely upon an incomplete report published in a drug journal, one which was necessarily incomplete, though in some respects excellent. CLINICAL MEDICINE was represented, and accordingly is in a position to say, unequivocally, that the *Journal* editorials give a distorted and unfair view of the work and the purposes of this National Association. As the full records will show, the sentiment of the Association, as voiced by Mr. Lilly and Dr. Abbott, and concurred in by President Ryan and the membership generally, was distinctly and definitely in line with modern drug reform, and against drug abuses. The bills opposed were defective—written in ignorance of trade conditions—and in the main require revision only. The editor of the Association *Journal* may be surprised to learn that no voice was raised in the meeting against the work of the Council on Pharmacy and Chemistry.

It is greatly to be regretted that the official organ of the American Medical Association is disposed to take such a critical attitude toward practically every other official body. More is to be gained through intelligent cooperation, the conscientious union of efforts in the furthering of reasonable reform, than by this position of uncompromising antagonism. We are sure that the drug manufacturers would welcome constructive criticism; but they are hardly likely to look with a friendly spirit upon criticism which ignores actual conditions, while it is distinctly destructive.

CLINICAL MEDICINE is not the spokesman for the National Association of Manufacturers of Medicinal Products. It does not even indorse, or necessarily approve, all the action it has taken or may take. But it believes that this body may become a strong power for good in this country; that it will do much for the "cleaning up" of the defects in the drug business; and that, on the whole, the medical profession will be assured of better products and better service because of its existence. And it believes, further, that such a movement is worthy of the support of doctors and druggists—and all those interested in their welfare.

## COME-AND-GET-ME!

A Kentuckian is alleged to have bequeathed his head to a doctor who saved the man's life once and agreed to accept the legacy as a recompense. All the heir has to do is to go about twenty-five miles up into the hill country and get the head from the sorrowing relatives. Surely.

We must make use of our quarter-hours. We must do something more than merely play. What a large amount of knowledge we can get in the intervals!
—Dr. George H. Palmer.

## "THE OLD-FASHIONED DISHRAG"

How dear to my heart is the old-fashioned dishrag, the dirt-laden dishrag that hangs on the rack. It goes at the dishes from glasses to kettles, and when it gets round to the latter it's black. Polluted to start with, it doesn't get better, but gathers the germs from the kitchen refuse. It smears all the china and greases the silver—it could only get justice from Rabelais' muse. The old-fashioned dishrag, the germ-breeding dishrag, the filthy old dishrag that hangs on the rack. It's only a piece of somebody's old shirttail or the utilization of Billy's old socks. It's amended the messes when baby's forgotten or maybe the kitten's neglected her box. The cook was most surely admonished to boil 'er, but stuck 'er away until she had time. The missis is fearful that kicking might roil 'er. (Now where in the deuce shall I get that last rhyme?) The old rotten dishrag, the smelly old dishrag, the septic old dishrag that hangs on the rack.

## THE COUNTRY DOCTOR VERSUS THE CITY DOCTOR

*The Journal of The American Medical Association* some weeks ago published, in its department of therapeutics, an editorial description of how (or how not) to manage normal labor. In a succeeding issue of

the *Journal*, this article was severely attacked by some of its correspondents. It was asserted that the method described was archaic, and that the advice given was twenty years behind the time. The editor, in trying to explain, unwisely stated that the article was written for the country doctor. In still later numbers of the *Journal* the vials of wrath were poured out upon his unsophisticated head; and not only was the article submitted to still more severe criticism, but, also, a number of country practitioners were quick to resent the suggestion that they were any less familiar with modern obstetrical technic than the average city physician.

Will our "great men" of the city never learn that the country doctor is not to be looked down upon? The intellectual standard of the inhabitants of our small towns and rural communities, with their preponderance of the American-born and Anglo-Saxon, is every bit as high as that of the great city, with the millions of ignorant and half-paid foreign immigrants who crowd its slums and fill its tenement houses. Also, the country doctor will average just as high in intellect, skill and professional training as his city confrère—perhaps higher, for his net income is larger, permitting of books, journals and postgraduate study; he has a greater incentive to study, and a greater individual responsibility develops initiative. The fact that there are a few men in our medical centers who are masters affects the character of the majority but little. The great man is often esteemed anything but a hero at home—never a "martyr."

The country doctor is right in resenting these constant intimations of inferiority. Our rural communities have no monopoly of the incompetents.

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**The great discovery is never the result of chance—rather the fruit of prolonged research, methodically and laboriously pursued.**

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## THE RISE OF ARSENIC

We have always known that arsenic was a valuable remedy, but just how valuable, most of us did not realize until Ehrlich's discovery of the now celebrated "606" startled the world. His researches have magnified the interest in this substance, yet it requires only a cursory investigation of the work of earlier investigators to show that its possibilities had been more than half guessed by those who had gone before.

We shall not try here to review the literature of the subject, however interesting it may be. Yet there are some facts, brought to light during recent years, that deserve to be recalled.

For instance, the great Koch himself was one of the first to show the exceeding value of the atoxyl treatment of sleeping sickness. Atoxyl is an arsenic preparation.

The cacodylates, another class of arsenical preparations, have been immensely popular in France, and in this country Dr. John B. Murphy has recently demonstrated their value in the treatment of syphilis.

Salvarsan was shown by disciples of Ehrlich to be curative in relapsing fever, before it was definitely tested in syphilis, and still another arsenical preparation of the same series has been found specific (so it is alleged) in the treatment of surra, the disease which has swept away so many of the domestic animals in the Philippines and in central Africa.

In all these diseases the arsenic seems to have a specifically destructive action upon the lower forms of animal life which are presumed to act as specific inciters. The problem of our chemists and biologists has been to find a form of arsenic which, while being highly toxic for the lower organisms, is but slightly so for man.

This revival of arsenic-therapy brings to mind an episode in American medical history, one which left little impression on our minds at the time the events were being enacted, but which becomes important now, in the light of Ehrlich's discovery. One of the first opportunities to test out, on a large scale, the truth of the lately discovered mosquito-theory regarding the transmission of yellow-fever was during the New Orleans epidemic in 1905. The splendid demonstration of the efficiency of our Marine Hospital Service, on that occasion, is history. However, there was another factor in that epidemic, which some of us may have forgotten:

Dr. Reginald B. Leach—at that time of St. Paul, Minnesota, but now of Paris, Texas—was a firm believer in the efficacy of arsenic as a prophylactic of yellow-fever. It had been tried in Brazil, with good results. Backed by Senator Cushman K. Davis, of Minnesota, he sought Government recognition for an official trial. Failing to secure this, he went to New Orleans and began to advocate this remedy in every public way. The idea caught the popular imagination, and as a result everybody began to buy arsenous-acid tablets. According to an estimate made at the time, between fifteen and twenty millions of these tablets were disposed of in New Orleans alone, enough, according to Dr. Leach, to arsenicize properly 165,000 persons, leaving only 95,000 persons unprotected. Dr. Leach alleges that the checking of the ravages of the disease occurred as soon as arsenization began, and that only five of those who took the arsenic treatment were attacked, while 3,399 persons not so protected took the disease, 452 succumbing.

These facts have been brought vividly to mind by the introduction, in the present Congress, of Joint Resolution No. 236—introduced in the House by Mr. Sheppard. This bill provides for the appointment, by the President, of a commission of physicians to investigate the arsenization theory for the prevention of yellow-fever. Considering the renewed importance given the arsenic-therapy by Ehrlich, the bill deserves friendly consideration.

We have long believed in the peculiar efficacy of the arsenical salts. In malaria, for instance, quinine arsenate has been demonstrated, time and again, to exert an action out of all proportion to the percentage of the quinine present in it. There is good reason to believe that the organisms which cause malaria have a closely allied analogy to those causing yellow-fever, relapsing fever, sleeping-sickness, and even syphilis. The success of arsenic in any one of these diseases is an encouragement to investigation along similar lines in other similar diseases. Clinically, we know what quinine arsenate will do—and this action, as was to be expected, now seems to rest upon a sound scientific basis, though the details remain to be worked out.

## INSURANCE AGAINST ILLNESS

Last September we published an editorial on "Preventive Medicine," in which we suggested that the emoluments of medical men might be arranged so as to allow them to devote the bulk of their time to the duty of preventing disease. Sickness is costly. Insurance against that contingency is well worth while. The plan suggested at that time was to pay the family physician a salary instead of paying him by the visit, as is now the custom. The physician, under such an arrangement, could make one or two visits each month, look over the family, the residence, the environment, note the tendencies to disease, and then, by his advice, do much to ward off illness, or to detect the same in the earlier stages, when it would be far more manageable. Besides, the incomes of members of the profession would be placed on a definite basis, and there would then be no such thing as bills unpaid because the wage-earner was disabled at the time he became indebted. It seems needless to specify—we all know the facts.

*The Columbia State* (Columbia, S. C.), of January 26, speaks thiswise editorially: "The surest and the cheapest way to combat disease is to prevent it, and the surest and cheapest way to prevention is to discover disease in its early stages. Regular and frequent medical examinations of all persons would result in rapidly improving the health of the community, but they are impracticable. The people are too much separated. To visit all the families of Columbia at their homes and examine every member once a month would require the services of more physicians than Columbia can at present afford to support."

Suppose we calculate.

The city of Columbia, according to Polk's Directory, in 1910 had a population of 45,507, and 61 physicians. That gives 746 souls to each physician. These 61 doctors had been in practice for periods, respectively, as follows: 1 year, 1; 2 years,

1; 3 years, 2; 4 years, 1; 5 years, 2; 6 years, 1; 7 years, 4; 8 years, 2; 9 years, 1; 10 years, 3; 10 to 15 years, 16; 15 to 20 years, 6; 20 to 25 years, 5; 25 years and longer, 10.

Now let us see what the doctors would earn, basing our calculations upon years in practice and presumptive remuneration per month from each individual under contract, the latter numbering 746. This works out as follows:

| | PER MONTH | TOTAL |
|---|---|---|
| 1st year | $0.10 | $ 74.60 |
| 2nd " | 0.20 | 149.20 |
| 3rd " | 0.30 | 223.80 |
| 4th " | 0.40 | 298.40 |
| 5th " | 0.50 | 373.00 |
| 6th " | 0.60 | 447.60 |
| 7th " | 0.70 | 522.20 |
| 8th " | 0.80 | 596.80 |
| 9th " | 0.90 | 671.40 |
| 10th to 15th year | 1.00 | 746.00 |
| 15th to 20th " | 1.25 | 932.50 |
| 20th to 25th " | 1.50 | 1019.00 |
| 25th (and seq.) " | 2.00 | 1492.00 |

Those hypothetical sums, remember, stand for the monthly reward, not the income per year.

Would those incomes satisfy the physicians of Columbia? The man who would be only in his first year of practice would receive as much as the average income today of the American physician, and even more. The average Columbia physician would receive a monthly income of $760, or $9120 per annum. His monthly income—cash, too—would exceed the average annual income of the American physician.

Let us see whether Columbia could afford this much for health insurance: Not a person would be called upon to pay more than $24 per annum, and this to include every charge for attendance, medical, surgical, obstetric, and all the specialties, for it takes in all these, every practician now registered in that city.

Of the 45,507 citizens, there would be called upon to pay $2.00 a month, 7460; $1.50 a month, 3730; $1.25 a month, 4476; $1.00 a month, 14,370; $0.90 a month, 746; $0.80 a month, 1492; $0.70 a month, 2984; $0.60 a month, 746; $0.50 a month, 1492; $0.40 a month, 746; $0.30 a month, 1422; $0.20 a month, 746; $0.10 a month, 746.

Ten dollars a month would be the largest monthly fee for a family of five, and from this down to fifty cents. This would pay, be it remembered, all charges for every medical attention needed, and far more in the way of prevention of disease by the domiciliary visits of the physician. The interests of patient and physician alike would be enhanced by prevention of disease.

Could the population of Columbia stand that schedule? If not, were it cut in four, we would still have three times the average American doctor's income. It will be noted that that city is overburdened with elderly practicians, and that the members of the profession under ten years' standing are very few. Also, the proportion of physicians to population is exceedingly small. To do the work contemplated, double the present number would be none too many—and then they would be getting six times the average income of the profession. Add 61 recent graduates, and each would receive $37.30 per month for the first year—and we venture the assertion that many a youngster gets less. The older ones would have their incomes cut to $746 a month, but they could doubtless worry along on that together with the savings and investments of twenty-five years of well-paid practice.

One other good thing such a system of health insurance would accomplish is that it would put an end to the preposterous charge of a dollar a year for society practice. Fifty cents a month would not begin to pay the average lodge member's beer and tobacco bills, and surely health insurance is worth that much.

Our calculation calls for a payment on the part of the citizens of Columbia of $46,401.20 each month; or slightly over a dollar a month for each of the 45,507 inhabitants. Could they not afford that much?

## VACCINES AND BACTERINS

In our December, 1911, number a correspondent called attention to our chaotic biologic terminology, especially as regards the use of the words "bacterins" and "vaccines." These two words are now generally used interchangeably in human practice, the only exception being in references to "smallpox vaccine."

To *vaccinate*, formerly meant to introduce into the body, through the skin, an attenuated smallpox virus or, to be more exact, the virus of cowpox, or vaccinia. As to the nature of that virus we are still ignorant, though probably it is *not* bacterial. Since Wright's discovery of the opsonin, this word "vaccinate" has received a new significance: The vaccines of later days are more properly *bacterins*, since they consist of suspensions of dead bacteria. These are usually introduced into the body hypodermically in order to raise the resistance against some specific organism.

It will be seen, therefore, that there are two distinct classes of products to which the word "vaccine" is applied:

The first includes the smallpox vaccine, the Pasteur antirabic vaccine, and the black-leg vaccine used in animal practice. These contain living though attenuated organisms, and they are employed to induce a natural, and presumably milder, attack of the disease for which each is specific, thus preventing subsequent illness.

The second class consists of dead germs —bacteria which have been destroyed by heat or otherwise. These, when introduced into the body, increase the susceptibility of the invading organisms to the natural immunizing forces of the body, making them more easy of destruction. Remedies of this class are used both to prevent disease and to cure it.

It is unfortunate, of course, that the word, "vaccine," was ever applied to this second class of substances, but the terminology is here, and we are forced to accept it. This we owe in part to Wright, himself, who apparently was the first to use it in his studies of typhoid "vaccination." At the present time these words, "vaccine" and "vaccination," are employed, in referring to bacterial products and their administration, in practically every textbook and in hundreds of journal articles. Thus, in the second volume of *The Journal of the American Medical Association* for 1910, we find nearly one hundred articles and items of various kinds about vaccines (bacterins) referred to in the index.

However, since this usage is fundamentally wrong, we join our plea to that of our correspondent, that the term "vaccine" be reserved exclusively for products containing the attenuated *living* organisms, intended to produce active immunity, and that the word "bacterin" be employed exclusively for the products containing *dead* bacterial cultures, used to increase the resisting capacity of the body.

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Not all who seem to fail have failed indeed.
Not all who fail have therefore worked in vain.
There is no failure for the good and wise;
What though thy seed should fall by the wayside,
And the birds snatch it: yet the birds are fed;
Or they may bear it far across the tide,
To give rich harvests after thou art dead.
—Charles Kingsley.

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## A USELESS SACRIFICE

A paragraph in the daily papers tells us that at a Racine hospital a nurse gave the food intended for a typhoid-fever patient to another one. Fearing that fault would be found with her by the head nurse, or that she might have transmitted typhoid fever to the other patient, the silly nurse took her own life.

Truly, there is danger in undigested knowledge. The extravagant fear of such infections shown by some persons and the excruciatingly minute cautions given to the nurses for the avoidance of such errors, acting upon the mind of persons not sufficiently instructed as to the real importance of these matters and without sufficient nervous and mental balance, produced the lamentable result mentioned.

It is well—and very well—to insist that young women desiring to enter the field of trained nursing should have a high-school education as a preliminary. It is also well that they should have a strong substratum of common sense and of common humanity. And there are several other desirable qualities.

Whatever else an instructor does, he should earnestly endeavor to satisfy himself as to the effect of his teachings on the minds of his pupils, by constant close questioning. He will quickly realize that the substratum of knowledge in his own mind that has become subconscious and is taken for granted, does not exist in the others, and his teaching has been therefore misunderstood.


# The Treatment of Infantile Paralysis*

*With Special Reference to the Paralysis*

By JOHN RIDLON, M. D., Chicago, Illinois

THE name infantile paralysis is far from satisfactory, since the disease attacks patients of any age; but there is no other that is even as satisfactory. The name acute anterior poliomyelitis seemed very descriptive when we knew less about the disease. Now we know that not only may the brain and medulla be affected but also parts of the spinal cord other than the anterior portions, and even numerous other anatomic structures of the body. So we continue to call it infantile paralysis.

The onset of the disease is sudden; without other warning than the possible contact with someone else suffering from the disease. It usually occurs as sporadic cases, but in later years serious epidemics have been recorded.

### Knowledge About the Disease Is Limited, Statistics Are Unfavorable

There are no typical and diagnostic symptoms at the onset; often none for several days, until the paralysis appears.

There are no preventive measures to be taken beyond the isolation of the patient.

We do not know how the disease is contracted, but we do know that other children who come in contact with the sick may, but may not, become infected, and that some of the domestic animals, such as chickens and cats, in the families of these cases, may suffer from paralysis; and we know that the disease more often occurs in the autumn than at any other time, and to a greater extent when there is much dust in the air.

We do not know what the virus is; it has not been identified. But we do know that it passes through the finest porcelain filters; that it keeps well in glycerin; that it is quickly destroyed by hydrogen peroxide; that the spinal cord of a child dying of the disease will reproduce the disease when injected into the brain of monkeys, will usually cause it when injected into the peritoneal cavity, and frequently will produce it when sprayed or dusted into the throat. It is, therefore, thought that the virus probably makes its entrance into human beings by way of the throat. Further, it is probable that it is excreted also, to a great extent, by way of the throat, since in monkeys infected by way of the brain or peritoneum the mucus membrane of the throat is at times found to contain the virus in sufficient quantity to infect other monkeys.

When a patient is attacked with the disease there is no known remedy to check or in any way to limit its course.

The patient may recover without paralysis or with paralysis; he may recover from the paralysis or it may remain permanent; or he may partially recover, as is usually the case; or he may die.

Recent statistics indicate that about 25 percent of the victims recover without paralysis, or recover from the paralysis;

*Read before the Peoria City Medical Society, Feb. 6, 1912.

about 50 percent remain permanently paralyzed to a greater or less extent; and that about 25 percent die.

When the disease is confined to the anterior horns of the spinal cord, as it usually is, the paralysis is of the flaccid type, but when the brain is involved, spastic contractures may be present. Formerly we believed that all cases were of the flaccid type, but the mixture of flaccid paralysis with spastic contractures in the same patient seems sufficient evidence to warrant us in placing some of the purely spastic cases in the class of infantile paralysis.

Certain cases of the flaccid type show early contractures; and by early we mean within the first week or two. In these cases we must believe that the disease extends beyond the anterior horns of the cord, and like the medullary and cerebral cases are more serious than the ordinary type of the disease.

The distribution of the paralysis, the percentage of recoveries, and the mortality differ in different epidemics.

In most cases the paralysis is confined to the lower limbs, and to the limbs below the knees, and also to the anterior muscles; and usually very few of these paralyzed victims fully recover. But in the cases that have occurred in this state, during the past two years, that have come under my observation, there have been a surprising number in which the muscles of the body and upper extremities were involved; some cases have been of the hemiplegic variety, some with crossed paralysis; a remarkable number of the patients have fully recovered, and very many have died.

### Practical Futility of Treatment, Except to Relieve

Spontaneous improvement takes place in almost all cases to a greater or less extent; it usually goes on for from six to eighteen months, and sometimes for a much longer time, and occasionally a patient fully recovers.

Orthopedic and surgical treatment seems to be of material advantage in many instances. But because a patient improves under treatment and an occasional one fully recovers, one must not credit himself with the cure; while, on the other hand, if a patient does not improve under treatment, one is not deserving of censure. In every instance it is as it is.

But many times one may relieve suffering to some extent; in most instances one may prevent the development of contraction deformities; in all cases one may correct deformities that have been allowed to develop; one may support weak and useless limbs by braces and make them of use; and occasionally one may operate for the sake of some improvement and for the sake of freeing from the bondage of braces.

### Some of the Useful Measures Available

Early contraction deformities should be prevented by the application of well-padded plaster splints. Very sensitive patients may be made more comfortable by a plaster-paris bed until the sensitiveness has passed.

As long as some sensitiveness remains massage and electricity should not be used. When the sensitiveness has passed the slowly interrupted galvanic current may be used, not for any magic in the electricity itself, but as a means of exercising the paralyzed muscles. Personally, however, I think electricity of little or no use, and not to be employed when it pains or frightens the child.

Local heat and massage appear to be of positive advantage as stimulants to nutrition.

Of more value, however, are movements: passive, active, and resisted movements, throughout the entire paralyzed area. Every joint should be put through its full normal range of motion every day. This for the sake both of exercising the paralyzed muscles and also to prevent structural shortening of the unparalyzed and unopposed muscles.

The most valuable remedy of all is the voluntary use of the weakened muscles by the patient himself. At first the movements must be assisted, then free, and finally resisted. In each the patient must use his utmost endeavors, but stop short of the point of overfatigue.

This is a law: The use of a muscle up to the point of fatigue is strengthening; exercise past the point of fatigue is weakening. This law is equally binding whether the exercise of the muscle be voluntary or forced by the slowly interrupted galvanic current.

### Braces and Operation

Braces should be used only for two purposes: To prevent the development of deformity, or, to enable the patient to use the limb more and to use it better than he can without braces.

In considering the use of braces one should ask himself:

Just what am I trying to do?

Is it worth doing?

Am I really doing it?

To send a patient to an instrument-maker, who knows nothing of anatomy, physiology, pathology or the disease in question, is as absurd as it would be to send a patient with any kind of disease to a druggist with a request for some medicine.

Unless the attending physician knows just what he wants in the way of a brace, can himself measure for it, make the drawings and specifications for it, knows whether he gets what he ordered or not, can fit and modify the brace in accordance with the requirements of the patient's condition—in a word, use the brace—he has no business handling the case at all. A brace is a useful thing only when used by skilful hands guided by an intelligent mind. Otherwise it is useless and a burden.

As to operations in infantile paralysis: Tendon grafting, followed by tendon transplantations, and silk tendon extensions and silk ligaments have been more or less fashionable with orthopedic surgeons for the past twenty years. Now that they are going out of fashion, they are being taken up by the general surgeon and general practitioner.

The truth about these procedures is very much as follows: The grafting of one tendon on to another is useless, and has been abandoned. The transference of the tendons of some muscles—particularly about the foot—that are actively causing deformity to the opposite side, where they may act somewhat to prevent the development of deformity still seems to be a justifiable procedure. In this operation the transferred tendon is attached directly to the bone by strong silk, or it may be extended by several strands of strong silk, if it happens to be too short to reach the desired place. The silk should be as strong as the best silk fish-line, sterilized by boiling for twenty minutes in sublimate solution, then immersed in hot paraffin and kept there until it is wanted for use, when the paraffin is again melted down. Sublimated silk not coated with paraffin may cause enough irritation to be thrown off.

But it must always be remembered that the transference of a tendon never, in any case, adds to the total strength of the limb; if anything, it lessens the total strength.

The insertion of silk ligaments, to add stability to a loose joint, gives more certain results. These may be inserted through the bone and carried outside the joint, or through the joint itself, as recently advised by Bartow, of Buffalo.

Anchylosing joints by excision or erasion of the joint surfaces in flail-joints is a very valuable procedure in selected cases, but ought not to be done in growing children.

Nerve grafting, which had a certain vogue a few years ago, is useless.

But all these modern operations are only refinements of the older and safer, and in most cases equally useful, method of correcting deformities by force or by simple tenotomies, followed by prolonged retention (from four to twenty-four months) in a plaster splint, with constant use of the limb while it is being retained in the corrected position.

# Gonorrhea and Its Complications

## *Their Diagnosis and Treatment*

By E. J. ANGLE, A. M., M. D., Lincoln, Nebraska

*EDITORIAL NOTE.—This is the first article in a series on "Gonorrhea," being prepared by Dr. Angle. These papers are written with special thought to the interests of the general practitioner, and are sure to command the immediate attention of the readers of* CLINICAL MEDICINE. *We urge every one to read them carefully, beginning with this vital introductory installment.*

A LARGE volume would not exhaust the potentialities conveyed by the caption of this article. Consequently, in a series of magazine articles, it will be possible to touch only upon the most salient features of our subject.

To Ricord, the celebrated French syphilographer, is due the credit of showing the duality of syphilis and gonorrhea. Later, Bassereau established the distinction between chancre and chancroid. The gonococcus, discovered by Neisser in 1879, and first cultivated by Bumm in 1895, is now conceded by experienced bacteriologists and clinicians to be the cause of gonorrhea.

It was soon recognized that other bacteria, such as colon bacilli, streptococci, staphylococci and pseudogonococci, were capable of infecting the urethra. Blockhart and Wolf, in 1883, described pseudogonorrheal urethritis and succeeded in cultivating and inoculating its microorganism. Several years later Roux recommended the Gram method of staining to differentiate between gonococci and other diplococci found in the urethra.

The writer well remembers when gonorrhea was regarded largely as an affection of the urethra, with occasional involvement of the prostate, epididymis and the joints. Today, we are beginning to recognize its protean character and the frequency of systemic gonococcic infection. In this connection, the investigations of Lofaro are interesting. He found gonococci in the blood in 58.2 percent of 67 cases of acute or chronic gonorrheal urethritis; in all the cases of chronic urethritis with stricture; in over 66 percent of cases with glandular involvement, in 50 percent of the cases of vulvitis and vaginitis, and in over 73 percent of the cases of urethritis with epididymitis.

After the gonococcus once gains access to the venous and lymphatic radicles of the genitourinary tract, extension to the whole organism is readily effected. The gonococcus then becomes a true factor of septicemia, and serious, even mortal illness may ensue.

Arthritis, tenovaginitis, and involvement of the fasciæ are the most constant lesions of a general gonorrheal invasion—the pleura, peritoneum, and the serous membranes of the cerebrospinal system being frequently affected. Gonococcic endocarditis is the most serious form of systemic infection and is usually accompanied or preceded by joint involvement. A large range of cutaneous and mucous-membrane lesions have been reported from this source, such as ulcers, abscesses, follicular, erythematous and keratosic exanthemata.

Hurst has reported an interesting case of primary facial infection with axillary involvement. A pimple appeared on the forehead a week after the patient had had his hair cut in a barber shop, other pustules followed and later the axillary glands enlarged and suppurated. Gonococci were found in the pus from the pimples as well as from the axillary glands. Bone lesions such as osteitis and periosteitis are occasionally reported.

At one time it was contended that the metastatic processes were due to the toxins and not to the gonococci. It has been conclusively demonstrated that gonococci are always present in inflammatory foci, and although they may later die out, their dead bodies continue the inflammation from their well-known pyogenetic properties. Mueller, Oppenheim, Bruck, Torry, and others have, during the past five years, applied the complement fixation test to

the sera of gonorrheal subjects. Schwartz has recently reported on the results of 324 tests. Many of these were positive from patients in whom the most exacting examination revealed no trace of gonorrhea in the genitourinary tract.

In a recent personal communication, Dr. Swartz assures me that further use of the test strengthens his confidence in the accuracy of his findings and that in no case should a patient be looked upon as cured which still gives a definite, strong, positive reaction six or eight weeks after the clinical evidences of the disease have disappeared. It would seem that this test is going to be of the same value in the diagnosis and treatment of gonorrhea as the Wassermann test has been in syphilis.

#### Anterior Urethritis

Barring aseptic catarrh due to chemical or mechanical irritation, every case of urethritis is due to bacterial activity. As will be shown when we come to treatment, it is necessary to differentiate simple urethritis, the result of other pyogenic germs, from specific urethritis, due to the gonococcus of Neisser.

Simple urethritis is caused by a large number of bacteria, the most frequent of which are the pseudogonococci, staphylococci, streptococci, and colon-bacilli. The period of incubation is usually longer than that of gonorrhea, namely, from eight to fifteen days. There is less discharge, less tendency to involve the deep urethra, and fewer sequelæ. The disease tends to localize in the urethral follicles. Frequently no germs can be found in the discharge. The pseudogonococcus usually is extracellular, and it does not decolorize by Gram's method of testing. In doubtful cases, cultures may be made, the pseudogonococcus growing on ordinary media.

A urethral discharge following intercourse does not necessarily indicate an unfaithful husband, wife, or mistress, respectively; inasmuch as many cases of simple urethritis are due to germs latent in the anterior urethra and are incited to activity by excesses or traumatism.

One of the most important biological characteristics of the gonococcus is its almost strictly parasitic nature. As a result, it cannot live for any considerable time except in living tissue or specially prepared medium. The organism soon dies when out of the body, even when present in moist discharges on infected clothing. From this it follows that gonorrheal infection from clothing and instruments is comparatively rare. Gonorrhea in the male practically always is caused by intercourse with an infected woman, or, if a repetition, by autoinfection from a latent focus in his own sexual organs.

A predisposition to gonorrheal infection undoubtedly exists in many persons. This may be due to a damaged urethra from previous disease, such as granulation and erosion, long foreskin, wide meatus or hypospadias. Gout, rheumatism, syphilis, and tuberculosis may predispose to it, by lowering cellular resistance. Under normal conditions, the squamous epithelium of the navicular fossa forms a successful barrier against the gonococci, but if this surface becomes fissured or eroded, infection quickly follows. If the organism gains access to the cylindrical epithelium just posterior to the fossa, inflammation rapidly ensues.

The question has frequently been raised whether gonorrhea does not start in the deeper portion of the anterior urethra, the infection being aspirated backward, owing to more or less of a vacuum resulting after ejaculation. This seems not at all improbable, and it would explain many instances of a short incubation period.

Are the toxins capable of causing urethritis in the absence of gonococci? A recent case of the writer's would seem to confirm this view. The patient in question developed a rather subacute inflammation six days after intercourse, and it continued for several weeks. No gonococci could be found, even after repeated instillations of silver nitrate. Cultures, I regret to say, were not made. The other party in the case had a chronic gonococcic endometritis.

The incubation period of gonorrhea varies from one to fifteen days, usually four or five. The shortest period, so far as my experience goes, is one day. This was a primary infection, and the history was unequivocal. The more virulent and nu-

merous the infecting medium and the less resistant the urethral defense, the shorter will be the period of incubation and generally the more severe the inflammation. The discharge is first quite clear, later becoming mucopurulent, finally purulent.

We should always remember that specific urethritis is never purely a surface inflammation. The gonococci penetrate deeply, causing an intense cellular infiltration beneath the surface of the mucous membrane and frequently extending to the spongy body. The crypts of Morgagni and the glands of Littré are similarly infiltrated. Deep infiltration usually means a stubborn case to treat.

### Diagnosis

After taking a careful history of the case (which should be preserved, for reference, on a special card for this purpose), we should next proceed to examine any discharge present. The glans and meatus are first cleansed with a mercury bichloride solution. Then a sterilized platinum loop is inserted into the fossa navicularis and the drop of pus removed is spread evenly and as thinly as possible on a clean glass slide. The specimen is fixed by passing the slide several times over a flame, when it is ready for staining.

In acute gonorrhea, staining with Loeffler's alkaline methylene-blue usually suffices for diagnostic purposes. A few drops of this solution is applied to the smear for a minute, washed off in running water, dried, and is then ready for examination with the 1-12 oil-immersion lens. If intracellular diplococci are present, coffeebean-shaped, with their concave or flat surface facing each other, we are reasonably certain of their being gonococci. The gonococci are always grouped in pairs or multiples of two. In chronic gonorrhea and in doubtful cases, Gram's method of staining should be followed.

Gram's stain is applied as follows: (a) Ehrlich's solution of Grubler's gentian-violet is applied to the fixed specimen for three minutes. The slide is dried with blotting-paper—not washed. (b) Cover the specimen with Lugol's (Gram) solution (iodine, 1 part; potassium iodide, 1 part; distilled water, 300 parts) for two minutes. (c) Cover with absolute alcohol until decolorized, then wash off excess of alcohol. (d) Add counterstain of Bismarck-brown for two minutes, rinse in water, dry, and examine. The gonococci will appear of a yellowish-brown color, while other bacteria will have a purplish-blue color.

In medicolegal work and where the Gram method leaves one in doubt, cultures should be made on blood-serum agar.

### Posterior Urethritis

Unless cured in the early period, every case of urethritis tends to extend to the posterior urethra which lies behind the cut-off muscle. In the more severe cases the vesical orifice and the region of the trigone are involved.

Acute posterior urethritis is almost always due to the continuation of inflammation from the anterior part of the canal, although autoinfection from foci of gonococci in the prostate and the seminal vesicles is responsible for many recurring attacks, some of which may be quite acute. The previous history of the case, also the fact that the symptoms appeared within a day or two after alcoholic or excessive sexual indulgence will usually clear up this point.

Posterior urethritis occurs in from 50 to 80 percent of the cases of gonorrhea, but often is so mild as to be overlooked, unless the two- or three-glass urine test is made regularly. It usually develops about the second or third week, when the inflammation has reached the bulb. When the inflammation is very acute or because of improper instrumentation, it may appear much earlier. The tonicity of the compressor urethræ has much to do with the limitation of gonorrhea to the anterior urethra.

Posterior urethritis complicates the prognosis of gonorrhea, by involving territory which cannot ordinarily be treated by the patient and by opening up avenues for infection, such as the prostate gland, seminal vesicles, testicles, bladder. Gonorrheal arthritis rarely occurs when the infection is confined to the anterior urethra.

### Symptoms and Diagnosis

In the mild form of deep urethritis, the patient may have no subjective symptoms,

or there may be a sense of weight over the pubes, heaviness in the perineum, and slightly increased frequency of urination.

In the severe form, we find quite a different clinical picture. Here the acts of urination are quite frequent and become more and more painful, while, if the base of the bladder is involved, vesical tenesmus keeps the patient almost constantly in the toilet room. The vesical tenesmus not only intensifies the pain, but frequently produces rupture of the capillaries in the congested mucous membrane, so that the urine is more or less tinged with blood, particularly the last few drops. Frequently there is some fever, with constitutional disturbance in the severer types.

In a dogmatic way, it may be said that the prostate gland is involved in every case of posterior urethritis, possibly excepting those in which the mucous membrane is only superficially involved.

The diagnosis of the severer types of deep urethral inflammation should always be confirmed by the two- or three-glass test. The mild forms frequently are overlooked unless the urine of the patient is examined at each consultation.

The two-glass test is based upon the fact that the cut-off muscle forms a barrier between the anterior and the posterior urethra. This test has been variously modified by genitourinary surgeons. Young recommends a seven-glass test in chronic cases. In acute urethritis, the two- and three-glass tests are sufficient for accurate diagnosis of urethral involvement. By inspection of the glasses, we note the amount of pus, character of the shreds, evidences of glandular involvement, and other conditions. This feature will be treated in detail when we come to chronic urethritis.

In the two-glass test, the patient voids about one-third into the first glass, then the rest of the bladder-content into the second. If the suppuration is confined to the anterior urethra, the urine in the first glass is turbid, that in the second, clear. If the entire urethra is the seat of suppuration, both specimens of the urine will be turbid—the first glass so from the pus washed out from the urethra, the second one from the pus formed in the deep urethra and which flows backward and renders the bladder-urine turbid and cloudy.

In the declining stage of acute urethritis, the anterior urethra should first be irrigated, from the meatus, with a solution of boric acid until the washings come away free of shreds. This is best done with a hand-syringe holding five ounces. This constitutes the first glass, and the urine is then voided into two glasses. The first glass (the washings) contains the pus and shreds from the anterior urethra, while the second and third glasses hold the pathologic evidences from the deep urethra and bladder. In assumed acute anterior-posterior urethritis with probable vesical involvement, the patient should urinate into three glasses. If the third glass contains more pus than the second, our presumption is confirmed.

Turbidity of the urine from phosphates and urates must be eliminated, the former clearing up by the addition of a few drops of acetic or nitric acid, the latter, by boiling. Chemical examination may show more albumin than can be accounted for by the presence of pus. This is supposed to be due to the increased pelvic pressure of the kidneys from the severe spasm of the bladder.

*(To be Continued)*

# How I Operated Upon a Kalinga Chief

*The Thrilling Adventure of a Government Physician in the Philippines*

By THOMAS E. MOSS, M. D., Bontoc, Mountain Province, P. I.

*EDITORIAL NOTE.—Not many physicians have had experiences such as Dr. Moss describes. He was captured by a savage tribe of head-hunting natives, carried far into the mountain fastnesses, and there compelled to perform a capital surgical operation upon the chief. Failure meant death; success meant—but you must read the story to the very end, to get all the thrills.*

III

ON the tenth day after the operation our patient was sufficiently recovered to permit of his being carried out of the house and placed in the shade of the trees. There was great rejoicing, singing and dancing, feasting and drinking, and I was lauded to the skies. There was nothing too good for me, and all kinds of apologies were offered, and I was showered with the choicest fruits the jungle afforded. The chief ordered that a big llanca (a kind of native fruit) be brought, and when it arrived he cut it open, took out the seeds, peeled off the choicest parts and handed them to me to eat; and I had to sit there and eat while he kept on peeling.

I did not object to this kind of thing, but soon began to fear that I might actually burst. However, I was making strenuous efforts to eat everything put before me, when, lo! out was trotted the woman the chief had promised me for a wife. The dusky wench fetched, as presents for me, a beautiful headax, a fine large spear, and a shield. I quit feasting right suddenly, for the fear came over me that once more I was going to get into trouble. Of course I had to refuse the girl, but that would be a terrible insult. As it was, I would rather have gone through twice the experiences of the past few days than to have to have taken that young female back home with me. You know, I was "sorter" afraid the wife of my bosom might fail to understand and appreciate in all their beautiful simplicity the customs of a people unhampered by the conventions of civilization.

Something heroic had to be done, and done quickly. So I got up and made a speech, telling the chief that I never could think of depriving him of such a beautiful creature, and that I was afraid if I took her out of her mountain home, where she had been born and raised, to roam at will with all the freedom of the jungle, and the mountain dew kissing her fair brow, and a lot more of such rot, that the sweet damsel would pine away, waste away, and die of a broken heart; and that I wanted to be as good to him as he had been to me, so gave her back to him, to love and cherish and protect. To all of which His Majesty graciously assented.

### Homeward Bound

The morning after this fortunate escape I was permitted to start on my return journey to civilization. Maybe I wasn't glad to be free again and once more feel the heft of my rifle and revolver, and have my face turned toward home. I had been gone a good many days, and had been through enough worries and uncertainties to last one man a lifetime.

I was given provisions enough to last me until I could reach home, or at any rate to the town of Tabuc, where I had been captured. A dozen Kalingas were detailed to see me safely down to within a short distance of that rancheria, when they were to return, for they could not go into its confines, as they were enemies. We had an uneventful trip back down out of the mountains to Tabuc, and reached that settlement about three o'clock in the afternoon. I found our horses at this place, for the men of Tabuc had caught them out on the prairie close to where we had been captured.

I did not want to stop at this rancheria for the night, as we still had several hours of daylight, and I knew I could reach a

Fig. 9. Here is where we slept on our return and were recaptured. Note the bamboo tube in which the Kalingas carried the Bassi; it is marked by a cross.

water-hole, which lay a half-day's journey toward my home, before it got too dark to travel; and even though we might have to journey a little after nightfall, I did not hesitate to attempt the trip, because I knew every foot of the trail from Tabuc on into Taguegarao, so I pushed right on and reached the watering place at about eight o'clock that night.

Before reaching the watering-place I shot a small deer. This my corpsman had thrown across his horse and brought along, so when we arrived we cooked all we could eat and had a fine supper, though we had to eat rice instead of bread. We picketed out the horses, and as soon as we had eaten we curled up on the ground and were asleep before we knew it. We were exhausted and slept like logs for several hours.

### "Off Again, On Again," as You Might Say

But we were rudely awakened to find ourselves again in the power of our enemies, and our arms in their possession. They had slipped up and quietly removed the guns, and now informed us that shortly after our leaving them they had received word by a runner that the chief was bleeding again, and they must bring us back.

Now, I had made quite a number of blunders on this trip, taking it all in all, and I decided then and there that I would make no new ones. I began to operate my thinkery at a lightning rate, and quickly worked out a plan. I did not intend to go back to that old chief if he and all of that murderous tribe of his died as a result.

There were nine of the savages and, as is their custom, they had brought along a bamboo tube full of "bassi," which is an alcoholic drink made from sugar-cane. It is very strong and generally bitter-tasting, and is used in the ceremony of making friends. They had obtained their supply from a friendly rancheria they had passed in making a detour around Tabuc, which they had been compelled to do in order to get on to the plains to follow us. This bassi suggested to me a plan of campaign, its bitterness aiding in carrying it out.

I told the savages that I was exceedingly tired. However, I valued the life of the great chief far more than I did my personal feelings and that I would gladly return with them and stay a month, if that were necessary; still, as they themselves also were tired, and as there were three hours yet before we could see well enough for us to start on the march, we had best lie down and sleep, but first drinking of the bassi to bind our friendship. To all this they readily agreed

### The Tricksters Outtricked, or, the Morphine Comedy

This arranged, I told my corpsman (in English, of course) to fetch me some water in a coco shell, bringing just enough for a

good mouthful and to dissolve in it all the morphine tablets he had in his case. And so it was done. As the principal, I was expected to drink first; so I took the bamboo tube of bassi in my hand and proceeded to explain to the savages once more that they were to lie down and sleep immediately after they had drunk the bassi, but one of their number to stay awake to do guard duty and to wake us up at the first streak of dawn. This seemed to dispel their last lingering doubt as to my good intentions.

This arranged, I took the shell with the water, containing the morphine, from the corpsman, telling the savages that their bassi was so very strong, and as I was not used to the drink I should have to weaken it a little. At this, I emptied the coco shell into my mouth and then quickly raised the bamboo tube to my lips, but instead of drinking, as they thought, I spewed the morphine solution into the beverage, then passed the tube to my corpsman, telling him to give it a shake and then merely pretend to drink his share. After that the doubtful friendship pledge was passed around until every mother's son of them had partaken of its cheering contents. True, some of them made wry faces at the stuff, but as bassi is notoriously bitter, and it was not of their own making, it did not arouse suspicion of my trick.

Immediately we lay down, and in a short time all were fast asleep save the sentinel. I did not realize until then how much of that morphine had been absorbed into my system from my mouth, but soon found that I had nearly as hard a fight to make as the sentinel on guard, for I was simulating sleep and at the same time trying to keep awake, in fact probably passed into the land of dreams for a few minutes, but was aroused when my corpsman pinched my arm.

Upon opening my eyes ever so little, I saw, to my intense satisfaction, sitting against the tree, the sentinel waging an uneven battle with the overpowering dope. I figured that it had been two hours since we had lain down, and I knew that we should have to act quickly. I could not make up my mind just what course to pursue, as I was afraid to shoot the sentinel, convinced that it would wake some of the other savages who possibly had not gotten very much of the drug.

Just then my little Filipino corpsman at my side took my hand and placed it upon the headax he had been carrying since we had left Nanong—the one given to me for my services. This ax had not been taken away from my attendant, because the savages had not the fear of an ax as they had of a gun, nor thought the little Filipino amounted to much, anyway. I myself, could not safely move, so lay still and waited. The corpsman rolled carefully over and noiselessly wiggled and squirmed away. Only by feeling did I know that he had left, for it was impossible for me to turn my head without danger of being seen by the sentinel, while my assistant lay on the other side of me and a little in the shadow.

### The Desperate Struggle for Freedom

I kept my eyes on the savage guard who was fighting manfully against the effects of the potion, all unconscious of the drug as well as of his danger. As I looked, I saw him start to rise, determined to overcome his drowsiness, and my hopes sank within me and I gave myself up for lost. Then, at that critical moment, an arm reached from out of the gloom at his back, an arm browned and knotted—and the sentinel's head tumbled down into his lap. Not a sound did the man utter as he sank back on those sinister brown arms and was eased down to the ground to a slumber more deep than that of his brothers lying round about. Then, as I rose noiselessly to my feet, I saw the corpsman pick up my rifle and revolver, over which the sentinel had been keeping guard. Quickly, but softly, I slipped over and received the weapons from him, he taking the dead man's ax from his stiffening hands and sticking it in his own belt. Then he handed me the bloody one, which I grasped in my right hand, taking the rifle in my left, for it would have been fatal to fire a shot in case any of the others awoke. Hence the combat had to be an absolutely silent one.

Next, the corpsman pointed to the sleeping forms on the ground and made the cleaving motion with the ax in his hands.

I signed to desist, for I did not want to kill any more than was absolutely necessary; besides, it could not have been done unless they were powerfully drugged, which I doubted very much. I did not at that time know how much morphine had been put into the spirits; but this I was soon to learn by dread experience, for the headless Kalinga corpse just then began to flop around in the way a chicken will do when its head is chopped off. The blow of the headax, it seems, in passing through the spinal cord, had completely paralyzed the trunk for a few seconds and now came the reaction.

All this had happened within a few seconds, but now the dead body was in convulsions and making enough noise to wake any one not drugged. Nor did we have to wait. In the wink of the eye, two of the sleeping warriors sprang to their feet. However, the one nearest my Filipino helper never knew what struck him; but the one nearest to me was wide awake, and, seeing the bloody weapon in my hand, took in the situation at a glance and, with his headax, aimed a vicious blow at my head. I barely had time to throw up my rifle and ward off the cut; then, forgetting about the ax in my hand, I dropped that and struck the man with my fist, knocking him down, and then, before he could rise, planting a second blow upon the side of his head, which put him down and out.

Fig. 10. The author in his office as he sat upon the night of the accident which befell the corpsman.

### Home, Sweet Home

Seeing that the other Kalingas were too drunk of the drug to do much harm, we cut the horses' tethers, jumped on and, riding bareback, made a dash for our lives. The animals were fresh and, being hunting ponies, an early morning race was exactly to their liking. They had been standing tied up all night under the trees and were chilled by the dew and night air, so needed no urging as we swept across the prairie toward home, leaving the Kalingas down in the jungle where we had passed the gruesome night. For two full hours we rode in a gallop and then slowed down to a gentle trot, at last reaching home late in the afternoon, slightly exhausted, but glad, mighty glad, you may rest assured.

I had lost, besides saddle and bridle, all my instruments and medical equipment. All I had to show was two headaxes, a rifle, and a somewhat befuddled head, for which latter possession I was rather more than thankful, and considered that, all in all, I had gotten off mighty luckily. I knew that I could recover the things lost on the gory field of conflict by going there with a detachment of soldiers and asking for them. However, it turned out that I did not need the soldiers; as a matter of fact, never afterward did I take with me a military guard on my trips through the mountains among the wild tribes, for the famous chief completely recovered after the operation, and my reputation among those savages was established for good. I could go unmolested anywhere I pleased and at all times was treated like a king; for the news of my having cured the chief of the Nanongs soon spread hundreds of miles, to all parts of the mountains.

Now comes the queerest part of this narrative, and bordering, as it does, on the supernatural, I must ask the readers to follow the story closely and caution them not to be too hasty in their conclusion; for I can assure them that, had they followed me through the six years of my experience among these savages, learning their beliefs and customs, they would be superstitious to some extent themselves.

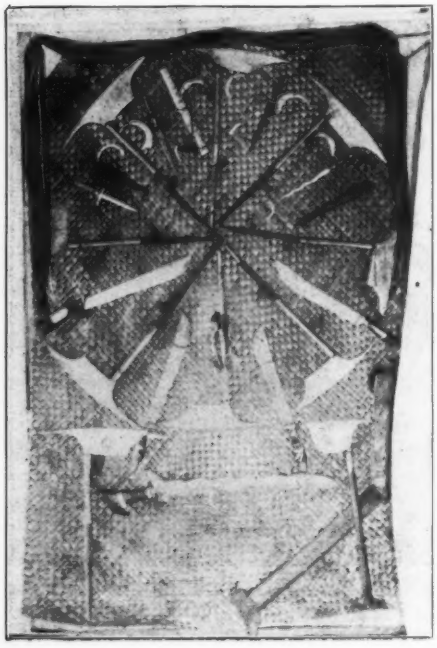

Fig. 11. Headaxes and weapons as they appeared upon the wall of the office.

### Nearly Murdered by a Ghost; A Gruesome Spook Story

One night, many months after I had returned from this eventful trip into the headhunters' domain, I was sitting in my office finishing up the monthly reports, which I was bound to get off in the morning's mail, so that they would reach Manila in time, and as there were many of the papers, I had to work late into the night. My corpsman, who had accompanied me on that trip, was sitting at his desk, over against the wall, assisting in my work. His desk stood directly beneath that space on the wall which I had devoted to my curios, such as axes, spears, various other weapons, besides prepared heads and other native curiosities. The weapons were arranged in groups and hung by nails driven into the plaster of the wall.

It must have been one o'clock in the morning—I was leaning back in my desk-chair watching the Filipino at his work, while occasionally glancing up at the murderous tools, letting my mind wander leisurely over the history attached to some of them, fixing my attention especially upon that headax of the Kalinga sentinel whom my corpsman had beheaded, at the same time observing that it hung directly over the latter's head. This ax was conspicuously beautiful, being ornamented with brass and silver.

In my mind's eye I could see the drowsy Kalinga warrior as he started to rise, and how then the corpsman severed his head with a fierce blow; I could see the convulsive movements of his headless body as it jerked and writhed upon the ground; I went over every foot of that awful trail and reconstructed every happening of the horrible experience. Then, as I saw each threatening face of that savage band rise before me, I fancied that I heard soft footfalls approaching the door of my office, and I looked up, expecting to see a servant enter to tell me to come on home, for my good wife always would sit up and wait for me whenever I was delayed at the office at night.

What was my horror, to see the door open and two Kalingas step into the room and glide softly toward the corpsman, who was working steadily away and did not seem to notice the men as they approached him. Looking closely, I was struck dumb to see that both Kalingas had their headaxes raised for the deadly stroke I knew so well. I tried to call a warning, but could utter no sound; but I sprang to my feet as the fatal blow fell. I saw the headax cleave the air, I saw it strike the man in the neck, I saw him fall to the floor; I saw him staggering to his feet, uttering a piercing cry of pain, then totter and fall. As he struck the floor, the Kalinga men vanished, but as they faded from sight I saw that one

carried the dead man's head in his hand—it was the Kalinga sentinel!

I rushed over to the corpsman. He was sitting on the floor trying to stop the flow of blood that was spurting in every direction. Snatching up an artery-forceps, I caught up the severed ends of the arteries, then laid him on the sofa and proceeded to sew up the wound. Having finished the dressing, I bethought myself of the Kalingas and of the headax which I had seen them drop on the floor. I went over to it, thinking that possibly it might help in identifying the assassin; but, picking it up, what was my surprise to recognize it as the headax taken from the slain Kalinga sentinel.

The weapon had been hanging on the wall of my office for many months, and knowing this, I can assure you that I began to have creepy feelings and to wonder whether I was sleeping, or dreaming, or what. Then, looking up to the place on the wall where the ax had been suspended, I saw that it was not there. As to whether that ax had become loosened and fallen and in its descent had struck the corpsman in the neck, or whether the spirit of the dead sentinel had come to avenge himself, I do not pretend to know. One thing is certain: to me the strange occurrence in that gruesome midnight hour will for all time remain an unsolved mystery.

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# Atropine and Its Applications

By HAROLD HAMILTON REDFIELD, A. B., M. D., Chicago, Illinois
Professor of Therapeutics in the Bennett Medical College, Medical Department of Loyola University; Therapeutist to the Jefferson Park Hospital

*EDITORIAL NOTE.—Here is another of Professor Redfield's interesting and valuable drug studies. Unlike many other articles of this character, these contributions are exceedingly practical, being founded upon the author's extensive personal clinical experience.*

HISTORICALLY considered, we find, among the earlier authors who wrote on the subject of therapeutics, the first authentic account of the medicinal use of belladonna in a book issued in Paris, entitled "Le Grand Herbier." The internal use of the drug is first referred to by Amoreaux (Paris) in 1760, who, later, was followed by Daries (Leipzig) in 1776, and Muench (Goettingen) in 1783 and in 1785. These writers treat the drug from the viewpoint of the pharmacist or the therapeutist, and it remained for Leonard Fuch to call attention, in 1542, to the toxic properties of this plant, this work being afterward supplemented by that of J. W. Faber (Augsburg), in 1677.

The application of belladonna to ophthalmic practice wa first called to the attention of the profession by Himlay (Paris) in 1802, while among the American writers of the early years we find it first mentioned in the Pharmacopeia of the Massachusetts Medical Society, published in 1808, and later in Thacher's Dispensatory, issued 1821.

Without doubt the most complete treatise ever penned concerning belladonna, from a physiologic standpoint, is that contained in the book entitled "Old Vegetable Neurotics," written by Dr. John Harley, and published, in London, in 1869.

### Description and Habitat of Atropa Belladonna

Atropa belladonna is a perennial herbaceous plant, a native of Europe, and takes its specific name from two Italian words, namely *bella*, beautiful, and *donna*, lady, a name given to it by the early Venetian writers, by reason of its use as a cosmetic by the ladies of the Venetian court.

The leaves of the plant are four to five inches long, two to four broad, ovate, and with entire margins. The roots are brown, rough, and marked by transverse ridges. They are about one or two inches in thickness, and attain to a foot or more in length. An assay of the leaves should yield 0.3 percent of the official alkaloid atropine, while the root should show an alkaloidal content of 0.45 percent.

While atropine and hyoscyamine are isomeric compounds, and by some observers are considered to be identical, yet there is a marked difference, which can easily be demonstrated by noting their respective behavior to polarized light. Placed in a polariscope, it will be seen that hyoscyamine has the property of rotating the beam of polarized light to the left—it is levorotatory; atropine, on the other hand, manifests no rotatory action whatever. Amenomiya (in *Archiv der Pharmacie*, 1902, 240, p. 498), in explanation of this rotatory inertia of atropine, offers the statement that it is composed of equal parts of a dextro- and a levorotatory substance, which, exactly balancing each other, render atropine inert as regards polarized light.

Attention was first called to the existence of atropine in the root of belladonna by Brandes, in 1819. It was not, however, isolated in the pure state until 1833, when it was produced simultaneously by Mein and by Geiger and Hesse.

Atropine is a strong organic base, forming silky prismatic and acicular crystals, which are odorless, and soluble in 150 parts of water and in 3 parts of alcohol. Owing to its relative insolubility in water, it is rarely used in the uncombined form, except in ointments and oleates. The form generally selected is that of the readily soluble sulphate, which is soluble in less than half its own weight of water and in 6 parts of alcohol.

The Pharmacopeia recognizes the alkaloidal atropine, the sulphate of atropine—dose from 1-200 grain to 1-60 grain of either—and the oleate, containing 2 per cent, for external use. In addition to these we have the nonofficial standard granule, containing 1-250 grain of atropine sulphate.

### Physiological Action

Locally, atropine can not be classed as an irritant, although the application, to the cutaneous surface, of strong solutions of this alkaloid has the effect of paralyzing nearly all forms of higher protoplasmic life—the sensory and motor nerves and the capillary walls.

When administered internally, it undergoes rapid absorption; but more slowly, yet none the less surely, when applied locally.

In man, it passes through the body practically (presumably altogether) unchanged, the principal avenue of exit being through the kidneys. The urine of one animal poisoned by atropine exhibits mydriatic powers when instilled into the eye of another living animal.

Taken internally, atropine, in sufficient dosage, produces dryness of the mucous membrane of the throat and nose, which, in patients who possess marked susceptibility to the drug, may extend to the palms of the hands or the soles of the feet. The pupils become dilated; this being due, first, to its paralyzing action on the end-organs of the motor-oculi nerve, thereby decreasing the sphincteric action of the circular fibers; and, second, by stimulating the sympathetic nerve, thus increasing the powers of the radiating fibers of the iris. Donder has shown that 1-700,000 of a grain of atropine in solution, when applied to the eye, will produce the typical mydriasis.

The pulse, under the influence of atropine, becomes quicker, and there is an elevation of body-temperature. After large doses, talkative delirium may occur, and a rash appears on the face and neck, resembling that of scarlet-fever, except that it lacks the characteristic punctations of the latter.

#### Influence on the Circulatory, Respiratory, and Nervous Systems

Given in medicinal doses, atropine produces a quickening of the pulse, a rise in arterial blood pressure, and an increase in the systolic output per unit of time.

The increase in the rate of the pulse is due to a depressing action on the terminal fibers of the vagus nerve in the heart, and not to any action on the cardiomotor centers in the medulla. This fact will explain the absence of this depressing action when atropine is given in the extremes of life, for in the very old and in young persons an extremely low tonus of the vagal fibers obtains.

The elevation of blood pressure following the exhibition of atropine has two reasons:

first, there is a marked constriction of the blood-vessels in the splanchnic area, due to the stimulating action of the alkaloid on the vasoconstrictor center; and, second, the heart-beat, as stated, is accelerated.

Remembering the physiologic law of circulatory compensation, that local hyperemia is always associated with a corresponding local anemia, elsewhere, we find the constriction of the splanchnic vessels to be accompanied by a dilation of the cutaneous vessels, following a stimulation or excitation of the vasodilator center; more blood being sent to the skin, the blood-vessels becoming thereby engorged, this producing pressure on nerve-endings, this resulting in irritation of the nerve-trunks, disturbances in the metabolism of the cells supplied by these nerves, increased local heat, accumulation of waste products of cell metabolism, and this terminating in the typical rash.

In ordinary doses, atropine stimulates the respiratory center, the respiratory movements becoming quicker and deeper. Toxic doses cause paralysis of the respiratory center, and death by carbon-dioxide narcosis.

With regard to the nervous system, atropine, when given in large doses, causes restlessness, excitement and a talkative delirium, ending in stupor and coma. In all probability the stimulating action of the alkaloid on the brain, and especially on the motor areas, is accountable for the first of the manifestations named, while the later, or depressant, action of the drug on the controlling centers explains the stupor and coma.

The peripheral endings of nerves in the unstriped muscles of the stomach, bronchioles, intestines, uterus, and bladder are all depressed. In man, there has never been observed any depressing action on the motor nerves and involuntary muscle, although this does occur in frogs.

Applied locally, atropine depresses the ends of sensory nerves, but fails in producing such action, given internally.

### Other Actions of Atropine

*Secretions.*—By its depressing action on the nerve-endings in the secretory glands, atropine lessens nearly all the secretions of the body, an action easily understood from the fact that this depressing, or paralyzing, action on the nerve-endings prohibits or blocks the passage of centric impulses and thus putting an active gland into a state of rest; but as inactivity in nature always means a loss of function physiologically, such an isolated gland would necessarily show diminished or abolished secretive function.

This knowledge of the physiologic action of atropine tends to explain why the drug manifests no control over the secretions of the liver, pancreas, and kidneys, inasmuch as the secretions from those organs do not come uniformly under the control of any particular nerve or group of nerves, their production (especially that of the urine) being entirely a matter of osmosis, which latter process, again, is governed by the relative equilibrium in the blood pressure in the organs themselves. This fact we find emphasized in the diuretic action of digitalin.

*Alimentary Canal.*—Under atropine, there is a diminished secretion of the total quantity of gastric juice as well as of the percentage of hydrochloric acid. In large doses it decreases peristalsis of the intestines, while in small doses the reverse holds good.

Exhibited in conjunction with purgatives, it has the very desirable property of preventing griping, though—as in the case of physostigmine—we are unable to offer any hypothesis to account for this action.

*Temperature.*—In large doses there often is a marked rise in body-temperature. But here, again, we can only conjecture, and seek safety behind the hypothesis that it has a direct influence upon the thermogenic centers.

*Eye.*—Dilation follows both the local and the internal use of atropine; the mode of action having already been accounted for when discussing the physiologic action of this drug.

While the twofold action of atropine upon the sympathetic and the motor-oculi nerve offers a very beautiful and physiologic explanation of its mydriatic action in living organisms, we are somewhat at a loss for an explanation of the identical

action observed when it is applied in solution after death. The writer has had occasion to observe upward of fifty experiments in which atropine produced its characteristic mydriatic action, showing in the eyes of cadavers, in some instances fully two weeks after death, as well as in the eyes of frogs and bullocks, even after removal from the body.

Having a paralyzing action on the endings of the ciliary muscle, it paralyzes accommodation and lessens intraocular tension.

### The Toxicology of Atropine

Atropine manifests its toxic properties by the following train of symptoms: Dryness of the throat, dilated pupils, quick pulse, hurried respiration, restlessness, talkative delirium, rash on neck and face, stupor, paralysis, collapse.

In the treatment of poisoning with atropine first evacuate the stomach with apomorphine, ipecac, or mustard and warm water. Follow this with tannic acid—which is the chemical antidote of all alkaloids. Stimulate respiration and circulation with cactin, digitalin or strychnine. Also, offset the inhibiting action of atropine on the secretions with pilocarpine.

Always bear in mind that the urine contains the major portion of the unabsorbed poison, and that, as generally occurs there a complete retention of urine in cases of belladonna poisoning, the reabsorption of the poison should be prevented by free catheterization.

### The Therapeutic Applications

The chief uses of atropine therapeutically are: to relax spasm, check excessive secretions, stimulate the vasomotor center, dilate the pupil, paralyze accommodation, allay peripheral irritation, stimulate intestinal peristalsis, impress the nervous mechanism of the heart.

*To Relax Spasm.*—In the general convulsions of cerebral or spinal origin atropine has little or no value, but it is an agent of great merit with which to combat local spasms following peripheral irritation. Hence it is a most useful remedy in the treatment of such spasmodic conditions as pertussis, and laryngismus stridulus; in the various forms of colic, whether biliary, renal or intestinal; in asthma, given in conjunction with glonoin (at first to relax), lobelin, and strychnine. In the latter it proves of sterling worth. Spasm of the vesical sphincter, causing incontinence of urine, is quickly controlled by a very few small doses of atropine.

The remedy can be given intramuscularly in torticollis, to relax the muscular spasm; although experience has shown that bryonin or rhus toxicodendron in conjunction with macrotin and aconitine will do as much, while obviating the use of the hypodermic syringe—an instrument that should be tabooed as much as possible.

*To Check Excessive Secretions.*—No better remedy can be had for checking the annoying night sweats of phthisis than atropine. Here, when given in doses of 1-250 grain at bedtime, it is usually efficacious after two or three doses. Its action, in these cases, is much more rapid than that of agaricin, while the psychologic effect on the mind of the patient is excellent.

In mastitis it is the remedy *par excellence*. The breast is hot, red, and painful, and suppuration is threatened. Give it here with aconitine, and the results will be immediate and pleasing.

*To Stimulate the Vasomotor Center.*—Here it fills an important place in the treatment of shock and collapse, especially when given with glonoin.

*To Dilate the Pupil.*—In acute keratitis it is an exceptionally useful agent in allaying ciliary irritation. Here, used in solution of 1 to 2 grains to the ounce it will prove very effective.

In iritis it should be the first thought, the drug serving to break down adhesions between the iris and the capsule of the lens. A solution of 4 grains to the ounce gives the best results in these cases.

*To Allay Peripheral Irritation.*—The oleate of atropine (2 percent) makes excellent local treatment and exerts a very grateful sedative action in cases of muscular rheumatism (pleurodynia, lumbago, myalgia, etc.), inflammatory conditions of the joints, orchitis, and neuralgia.

*To Impress the Nervous Mechanism of the Heart.*—While the cardiac effect of

atropine is not yet clearly defined or understood, yet we have abundant clinical evidence of its efficiency in nervous palpitation and tachycardia.

*Specific Symptomatology.*—Eyes dull, pupils dilated, patient is dull, stupid, and a condition of stupor or somnolence is present. The child sleeps with eyes half closed. Face is dull, devoid of expression.

#### Summary of Therapeutics

Persons of a bilious, lymphatic or plethoric disposition; women and children of a delicate skin; those who are happy, jovial, and good entertainers when feeling well, but who become peevish, violent, delirious and subject to convulsions when indisposed, seem to be especially susceptible to the action of atropine.

They take cold easily and are especially sensitive to drafts of cold air. There is generally a throbbing headache. When pain occurs, this comes on suddenly and without any apparent cause, leaving as suddenly as it came. The face is red and swollen. Pupils are dilated and staring. The eyes are congested. The carotids pulsate and the pulse is full and bounding.

Atropine should be studied in all motor disturbances when there is a condition of anesthesia, or when, owing to the great irritability of all the senses, there is present marked hyperesthesia. The muscles jerk or twitch.

It occupies an honorable place in those mental disorders characterized by marked alterations in the moral tone of the individual—hallucinations, melancholia, rage, with illusions of a spectral nature.

In the congestive delirium which so frequently attends the acute fevers or which is due as a result of metastasis to the brain, atropine is the remedy of choice.

The congestions met with in cases of injury to the head, when there are presented all the evidences of concussion, congestions brought on by great mental excitement or excessive indulgence in alcoholic beverages are promptly met with atropine.

The drug should be studied in neuralgia of recent origin or which occurs in young patients, especially when associated with hyperemia and hyperesthesia. The pains are generally most pronounced about 5 o'clock in the afternoon, coming and going quickly, and are made worse by motion. In these cases it will be found that, as a general rule, the trigeminus is the nerve most affected.

Its position in the treatment of fevers is between aconitine and gelseminine. The type of fever is usually continuous. The face is congested and red, eyes red and swollen, bright and glistening. In puerperal fever its exhibition is imperative; also at the onset of scarlet-fever or measles when the skin is hot and glistening.

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# Referred Patients

## *And the Business Relations Arising in Connection With Them*

By ARTHUR BOWLES, M. D., Ellsworth, Kansas

### IV

### Reasons in Favor of Fee Dividing

NOT only do the arguments against the divided fee fall flat when we attempt to analyze them, but there are powerful arguments against the collection of the entire fee by the surgeon and the retention of it by him in its entirety, to the exclusion of the regular physician.

For instance, there is a cry going up from the surgeons all over our land that malignant cases are not sent to them in an operable stage. Make the split fee legal and right, and it would do much to end this undoubted disgrace to our profession. For I firmly believe that the exclusion of the physician from participation in the surgical fee removes a large incentive for the early diagnosis of operable cases, and offers a direct temptation to him to hold surgical cases by ineffectual medical methods.

A woman, for example, comes to the doctor with an ulcer on her cervix and a bloody vaginal discharge. What does he do? He institutes a course of local treatments, at so much a treatment, and congratulates himself on getting a patient who will be coming in regularly for some time. The thought that it might be a carcinoma comes to him, but he does not entertain it very seriously. At least he thinks that he will try the effects of his treatments for a while, anyway, and then, if she does not mend, he may send her to a surgeon.

Now, why does this man not send the patient at once? I will tell you, and in one word: money. He wants the money that those treatments are going to bring him. I am not going to accuse him of being conscious of this train of thought. I do not for a moment believe that he is. But the subconscious reasoning is there, just the same. He does not entertain the idea of cancer seriously because, if he did, he would have to recommend that woman to go to a surgeon at once, and that would be a financial loss to him.

Financial reasons are a great subconscious factor in influencing the way each and every one of us regards the facts of life, whether we admit it or not.

### Why Not Try the Plan?

But just try it, my surgical brethren! Let the general practitioner understand that a case sent in early for operation will mean more to him financially than one that he has strung along for a while with his treatments until operative cure is impossible. You will be astonished to notice how quickly his eyesight will brighten up, until he can recognize a beginning carcinoma as quickly as a laboratory pathologist with his microscope.

Would this be doing harm or an injustice to the patients? I cannot see it that way.

And right here I want to say that the man who recognizes a carcinoma in its earliest stages and convinces his patient of the serious nature of the apparently simple lesion and secures the patient's consent to an early operation is doing a mighty hard bit of work. Those of us who have attempted it a few times know that this is so. And the man who accomplishes it is doing just as much for his patient as the surgeon who removes the disease, and is justly entitled to half of the fee. But, would he get it from the patient? Not in one case out of fifty! Then, to whom is he to look, if not to the surgeon; and who, save the surgeon, is in a position to see that he gets his reward? He might possibly get it in the hereafter, it is true, but that does not feed his family.

I have tried conscientiously to look at this matter from all sides, and I believe that, if injustice and harm have been done, it has been done by the man who wants the whole fee, all there is in it; and that man I have taken the liberty of dubbing throughout this paper the "fee-hog."

And thus it seems to me that the arguments are in favor of the division of the fee received for referred cases. The arguments advanced against it are no arguments at all. In fact, most of the writers are contented simply to inveigh against it, seeming to think it unnecessary to resort to argument or logic at all in support of their position.

### The Idea Certainly Is Spreading

Right or wrong, we are forced to admit that the fee-dividing idea is gaining ground within the profession. In some sections it is practically universal, and in none is it entirely absent. What does this mean? Simply that the day of the fee-hog is fast drawing to a close. The general practitioner is beginning to claim his rights, and the surgeon will have to accede to him. There has been no concerted action, only merely a gradual growth; and it is true that steady and gradual growth generally indicates permanency and strength.

Shall the practice be stopped? No! It is like water seeking the natural level. Rather let it go on; make it universal, because it is right that the physician receive his share—that he gets it. Recognize that it is becoming universal, and sanction it. Sanction it willingly, because convinced that we ought to, and not grudgingly because we are forced to, as will surely happen within the lapse of another space.

And who is withholding the sanction? Not the rank and file of the profession, not the general practitioner, nor the everyday surgeon; it is the small and self-satisfied circle of fee-hogs who want the whole thing and justify their rapacity in the name of ethics.

Assume now that I have proved my position, how may the matter be disposed of practically? I can best answer this by describing the methods employed by us in our own business. Other men might find that some other plan would work more satisfactorily.

When a patient is referred to us by another physician, the matter of the fee is not discussed with him or before him at all. This is so whether he is accompanied by his physician or not. He is examined and a diagnosis made. He is then told that we shall confer with his doctor in regard to his case. This conference takes place immediately if the physician be present, or by letter if he does not personally accompany the patient. We inform him about what the charge should be, and learn from him of the patient's ability to pay. All business details, you see, nothing professional about it, and also nothing to be ashamed of. The amount of the fee is generally settled before the operation, although nothing concerning it is said to the patient unless he inquires directly about it.

Following the operation, if the physician sees fit to collect his fee as a separate charge, we of course have no possible objection. In certain of our cases, although they constitute a decided minority, we have had no direct financial dealings with the patient whatever, but have dealt immediately with the physician, making a price to him before the operation and leaving the collection of it entirely in his hands. Most of these cases have been operated upon away from the hospital, in the patient's home, and the postoperative attention left in the hands of the local physician. When the doctor collected the bill, he of course charged for his own attendance whatever he saw fit.

In the great majority of cases, however, the physician referring the case has seen fit to leave the matter of charging in our hands, and have us include his fee with our own. I cannot remember that we ever had a patient leave our care dissatisfied either with the amount he had to pay or with his physician.

The stand I take in this matter is one that I have reached after much thought. My partner Dr. Downs and myself have had many earnest discussions about it. We have read all of the articles on the subject as they came out, and have made quite a study of the business conditions prevailing among the physicians of this state. I presume that what is going on in this state is reproduced in most of the others. All the evidence I can gather by reading and correspondence proves that it is so.

### Not Afraid of Criticism

I am aware of the fact that if this article is printed I shall have laid myself open to some pretty severe criticism, but I hope that seeing their own ideas in print will induce others to follow my example.

I have had experience with the matter from both sides, both as a general practitioner and as a surgeon, and I think that I understand the feelings of both fairly well. I can hardly believe that any of the surgeons who arbitrarily declare for separate charges have ever been general practitioners, or at least not for very long, or not under adverse conditions.

In closing, I can only affirm the sincerity of my position, and hope that investigation will bear me out in my way of looking at the facts of the case.

I believe that I can tell beforehand exactly how this article will be received by its readers.

The great majority will say, "That is all true, and good common sense, and it is just about what I think myself." These will be the general practitioners, and the everyday surgeons throughout the country, the operators in our smaller cities, and the younger and coming generation of surgeons in the larger ones.

A few—a very small minority—will say, "Rot," "Rubbish," "Absurd," "Sophistical." They will be the members of the

diminishing surgical ring which developed so rapidly in the few years following the advent of antisepsis into surgical practice; the men who until a few years ago had the practice of surgery pretty much to themselves, and hate to see it developing so fast that they cannot do it all.

The reasons they will assign for their disapproval will be those already gone over—lowering of professional standards, and all the rest of it. The actual reason, they refuse to recognize it will be just one thing—self-interest.

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[For a brief discussion of this paper, see Dr. Spink's letter, in the Miscellaneous Department, and the editorial comment thereon.—ED.]

# The Therapeutics of Neurology

By THOMAS GEORGE ATKINSON, M. D., St. Louis, Missouri
Professor of Neurology in The American Medical College; Editor of "The Medical Brief"

*EDITORIAL NOTE.—This is the third article in this series, which gives the treatment along active-principle lines. Other papers, on various phases of neurological work, will follow.*

## III

### FUNCTIONAL DISEASES

IN the preceding two papers we have discussed the diseases of the nervous system, grouped under the heads of inflammatory and of degenerative disorders, and we now come to the last division, namely, the functional class of nervous diseases, and this includes: Chorea, Epilepsy, Hysteria, Neurasthenia, Raynaud's disease.

If the habitual use of strychnine in degenerative diseases calls for condemnation, where shall words be found to characterize the pernicious practice of dosing all the functional nervous diseases with bromides? It were almost better for neurology if the bromides had never been made. Not that they are altogether without their uses—but their profuse and indiscriminate employment in functional nervous diseases amounts almost to a counterpart of the old habit of drugging all inflammatory diseases with opium.

The peculiar characteristic thing about the physiologic pathology of all these functional nervous diseases is that the neurones themselves are not primarily at fault. They are scapegoats. They bear the brunt of some other morbid condition, and the nervous disturbance is an end-result. A quality which is common to them all is a certain irritability and spasm, due, not to a positive exaggeration of function, but a sort of negative disability. The neurones may be likened to a workman fretting because of a lack or a poor quality of tools; and one might as well expect to get good work out of the workman in such a plight by drugging him into stupefaction, as to expect to remedy the neuroses with bromides. They merely add one form of toxemia to another.

The essential morbid state in all of these diseases is that of a nervous revenue which is not adequate to the ordinary demands of living. The rational principle of treatment is to bring the expenditure as far as possible within the income, either by decreasing the former or by increasing the latter, or both. In one sense they are the most obstinate of all nervous ailments; for, as intimated, these patients usually inherit their neurotic tendencies, and one has to do with the complex ramifications of biological stresses and strains. They are physical ne'er-do-wells, just as some persons are financially shiftless. It is almost as impossible to make solid, prosperous individuals out of either type as to change the leopard's spots. The most that can be done, with the physical, as with the economic ne'er-do-wells, is to educate and help them to live within their incomes.

It is clear that in this class of diseases drugs have but a secondary value. Just as

no one would think of assisting a financially shiftless person by giving him large sums of money, so it is worse than useless to give neurotic patients large doses of medicine. Small doses, repeated as necessary, of judiciously selected remedies for each individual case, are better. And, again, as in the case of the financially incompetent, we must not relieve the patient too much of his own physical responsibility, but judiciously coax and help him to do his own functional tasks. To assist metabolism, to promote elimination, and to build up nerve-tissue, that is about the extent of the medicinal treatment of neuroses. The rest is education and hygiene.

### Chorea

*Pathology:* Obscure. All sorts of irritating conditions may contribute to the exciting cause, but the underlying pathology is undoubtedly a biologic stress in which the mental faculties are precociously developed at the expense of body vitality.

*Treatment:* Relaxant and reconstructive.

Hyoscine and cicutine best relaxants.

Macrotin is almost a specific in the later stages, acting upon the muscles through the sympathetics.

Veratrine and glonoin as sedatives.

Arsenic is *par excellence* the best alterative and heart tonic.

Nuclein, to combat the anemia.

Saline laxative, in small doses long continued.

Absolute rest in bed a *sine qua non* of treatment. Hot salt-baths with massage, to stimulate metabolism. Change of scene, preferably at seashore, during convalescence; but no excitement. High altitudes are bad, on account of the shortage of erythrocytes.

### Epilepsy

*Pathology:* Obscure. During seizures there is great vascular tension in the cortex. There is reason to believe that there is alternate closure and dilatation of capillaries and small vessels. It is supposed that the fits depend, in part at least, upon a splitting of the lecithin-content of the neuron, offering the latter a convulsant leukomain instead of a true lecithin.

*Treatment:* Derivative, eliminant, relaxant.

Verbenin and solanine as anticonvulsants. Begin verbenin dose high, say 1 grain every four hours, and continue for three weeks; begin solanine at 1-64 grain, raising it 1-64 grain each week for three weeks, up to 3-64 grain. Then drop verbenin to 1-6 and solanine to 1-64 grain for a week. Each week increase the dose of solanine until the maximum is reached again; then reduce both drugs, until the fits are greatly diminished in frequency and severity; then keep on smaller dosage.

Lecithin, to supply the nerve tissue.

Atropine and glonoin, in combination, will often prevent a seizure if warning is felt, because of relaxing effect on c rculation.

Withdraw all salt from the patient's diet and substitute an equal quantity of sodium bromide. Except for this, *do not give bromides*, in ordinary cases.

Bromides and chloral, per rectum, in the status epilepticus only.

Carefully search for and remove *all* sources of bodily and mental irritation, no matter how seemingly trivial.

Keep intestinal tract scrupulously clean and aseptic. Low protein diet.

### Hysteria

*Pathology:* An exceedingly complex mental state, in which the body-functions respond to and carry out morbid mental concepts.

*Treatment:* Sedative and mental-alterative.

Cicutine, hyoscine, and gelseminine are the best sedatives and vasomotor equalizers.

In minor hysteria the goal of the psychic treatment is to "break the spell," which can often be done by a sharp dose of apomorphine to the point of emesis, or of elaterin to purgation, to interrupt a paroxysm.

In major hysteria it is a question of gaining the patient's confidence and enlisting her will, which necessitates long and patient care.

In both classes of hysteria the patient should be removed from the companionship of sympathetic relatives and friends. In major cases it is almost essential to have the patient in a hospital or sanitarium, under the care of a trained nurse.

Many cases that are diagnosed as hysteria are not hysteria at all, but neuroses resulting from body irritation of some kind, such as pelvic trouble. These, of course, call for removal of the cause.

**Neurasthenia**

*Pathology:* A continuous exhaustion of the nerve-centers, usually hereditary or congenital. It generally affects the entire nervous system, but cerebral and spinal types are distinguished, according as mental or nervous symptoms predominate.

*Treatment:* Recuperative and reconstructive. The less drugs, in general, the better. Do not dose individual symptoms.

The digestive and similar disturbances are usually the result, not the cause, of the neurasthenia. *Do not give strychnine.*

Cicutine and scutellarin the best sedatives. Bad cases, valerates. *No bromides.*

Colchicine and saline laxative, to maintain elimination.

Triple arsenates and nuclein, as tonics.

Hydrotherapy—tepid baths, sprays, and rub-downs—are invaluable helps to sedation and metabolism.

Electrotherapy properly administered, especially static electricity, is useful.

The principle of treatment is to teach the patient in every way to live within his nervous income, which is small.

# Secrets Hidden in the Walls of Blood-Vessels

*From the Records of My Private Laboratory*

By B. G. R. WILLIAMS, M. D., Paris, Illinois

*EDITORIAL NOTE.—This is the third paper in Dr. Williams' series on "Surprises, Delights and Curiosities Encountered in Medical Laboratory Work." They began in February. Read them all—back numbers are still available. More papers to follow.*

III.

THE mother of a certain young and unmarried woman had every reason to believe her daughter pregnant. The latter person, however, had at no time failed to furnish her portion of the family laundry, which of course puzzled the elder greatly, while she deemed it unwise to accuse the girl or even to demand an examination by a physician. But to the family doctor she took the details of the situation, informing him not only of her worst suspicions, but concerning the negative results of her observation.

A portion of the clot from one of the girl's napkins was teased out in Marx's fluid. This being examined microscopically, the hemoglobin-bearing cells were seen to be elliptical, presenting biconvex surfaces and being nucleated. The nature of the deception was assured. Now, if this young lady, instead of making a monthly sacrifice of one of her mother's pigeons, had taken the trouble to select for her purpose some mammal—a rat, dog or other quadruped—very intricate and tedious precipitin tests would have been necessary to show that this was not human blood. Even then we might not have been so certain of our ground.

Now in regard to the value of the blood examination in certain conditions, it is well to note that several prominent diagnosticians, men noted for their conservatism, state that the hemanalysis gives us more light upon the actual pathology of certain blood diseases and the treatment indicated than do many other procedures. And, if I were an authority, I should begin at this point and go a step further. Indeed, such an analysis sometimes gives us the only definite information we are able to obtain. In this connection, I shall record a certain incident.

The patient was pale and showed enlargement of the submaxillary, cervical, and axillary lymph-glands. The symptoms were those, apparently, of any oligochromemia and gave no definite information as to the diagnosis. The medical council included three men of acknowledged ability.

Said the first: "Gentlemen, this is a case of typical Hodgkin's disease. I have read several beautiful descriptions of this malady, notably the excellent communications of Wilks and Reed. Indeed, a mental picture of the disease has become so fixed upon my mind that now, when at last I have a typical case before me, there arises no question as to the true diagnosis. The nature of the line of treatment is plain."

To this the second man replied: "In a practice covering some fifteen years, I have yet to see a case of lymphatic leukemia differing in any respect from the one before us. In fact, I am willing to stake my reputation that such is the condition here and that the outcome will be death. Suppose some pathologist should find that, instead of leukemia, this is lymphosarcoma, what is the gain? The prognosis is the same. I cannot believe this to be a case of Hodgkin's disease."

The third man did not venture to express an opinion, but stood mutely watching his professional brethren, taking in every word. From these two men he had received no attention, until finally the patient turned to him, saying: "Well, Doc, what do you think is ailing me?"

Which side would this remaining physician take? For bravery, indeed, must it be to oppose both these men and their final conclusions. All eyes were upon him, two entreating, faintly hoping; four apparently cynical—almost menacing—

"Fred, to be candid," came the reply, "I should not like to commit myself upon this question—not just now. Either of these gentlemen may be right. Both are not right. Neither may have exactly hit the spot. I should advise an examination of your blood."

The ideal medical council is not carried entirely through in the presence of the patient, but in this instance there seemed to have been a mutual agreement to do so. A bomb exploding among these four could not have caused more excitement.

"Bosh," gasped the twain, feigning disgust but conspicuously alarmed. The patient, however, was convinced of the advisability of the suggested procedure. It is strange—and I fear often irritating to some men—what lively interest some patients do take in their personal welfare! Accordingly, in this instance, smears were prepared by the third physician and sent to the laboratory for examination. Also a bit of tissue was taken from one of the superficial glands and accompanied the blood preparations.

Now watch these two fellows crawfish, and wisely—two men who have boasted that through the many years of their practice they have had no time for "playing with a microscope," nor do they consider anyone very practical who has fallen into this foolish habit. "Study your patient," has been their advice to the one who would turn from the narrow path and attempt to put diagnosis upon a more scientific basis. The positive statements are modified and various clauses are added. The 'phones are kept ringing, until the third man scarcely recalls which said "leukemia" and which said "Hodgkin's", or whether either had really expressed a positive opinion.

The report finally came—"Tuberculous adenitis."

The essential and secondary anemias, as well as the various leukemias, blood tumors, and so on, are differentiated only by examinations of smears, blood-counts, and other methods employing the microscope. Nor is this all. These blood diseases are sometimes differentiated from other conditions closely simulating one the other only by the laboratory methods. An instance of this I recorded two years ago in *The Illinois Medical Journal*, where a case of supposed nephritis proved to be malaria.

In this connection, I wish to point out the unreliability of the hemoglobin chart as a diagnostic measure, when used otherwise than in connection with microscopical tests. The man who bases positive opinions on the former, and fails to go a bit farther in his examinations, must eventually come to grief. Used in connection with other methods, the hemoglobin in the color-scale has proved a valuable asset to the diagnostician. Deficient hemoglobin may be noted as a feature of practically any chronic disease. How often have I not had a patient referred or a specimen sent

to me with the information, "Here is a blood-case; hemoglobin 60 percent"; and how often, here, has the final diagnosis proved to be nephritis, carcinomatosis, tuberculosis, internal hemorrhage of ectopic gestation, or any of a hundred and one other things pathologic.

Do you know, doctor, that the hemoglobin in some cases may exceed 100 percent, reaching 108 percent or even higher? Notable instances of this kind have been recorded, especially in certain forms of splenomegaly. I observed, several years ago, a case of polycythæmia rubra where the hemoglobin was over 100 percent. The patient was affected with occasional attacks of cyanosis, headache and dyspnea, especially following exertion, but at times without apparent cause. This man's spleen was easily palpated. Occasionally his heart-sounds became so complicated and murmurs so pronounced and varied that an analysis and interpretation of these seemed practically impossible. One doctor, in discouragement, aptly expressed the situation: "Gentlemen," he said, "I never heard such a funny heart." At which we all laughed, including the patient.

Some surgeons, when speaking of the differentiation between enteric fever and some forms of appendicitis, state that a leukopenia means, "no knife," whereas a leukocytosis usually calls for operative interference. In certain instances, where a typhoid state exists and all else fails to fix our diagnosis, I believe this statement none too radical. But usually other evidences may be had in plenty, if we only take the pains to hunt them down. The diazo, Russo, and Grueber-Widal tests, when used in connection, and the results properly interpreted, usually give valuable diagnostic and prognostic information concerning the case in hand.

In this connection, I desire to describe a case along similar lines. This man became suddenly ill, complaining of weakness, epigastric pain of a severe nature, and some tenderness over the gastric region. Tympanites, and eventually a fever of a remittent type followed, but nothing more. The urine was loaded with urates, but a routine examination showed nothing further. Inquiry brought out the fact that the patient had not enjoyed the best of health for the past two months, though he had never spoken of being really ill. At last it appeared that the diagnosis lay between typhoid fever and infected gall-bladder, and analytical aid was asked.

The typhoid reactions were negative and no variations were noted in the white blood-cells. Perseverance finally demonstrated a small amount of sugar in the urine, and, incidentally, in the blood examinations, a marked secondary anemia of a cachectic type was noted. The red blood-cells were characterized by marked endoglobular degenerations. A Cammidge test proved negative. A positive diagnosis seemed impossible. The blood-picture did not justify a diagnosis of hemorrhage of the pancreas, but the symptoms may have done so. The possibility of abdominal tuberculosis was held in mind, but arguing against this was the negative diazo reaction. In contrast to the sudden attack, could the case be of a malignant nature? Laparotomy showed that such was the case. Perhaps the report should have read, "abdominal carcinomatosis". I doubt if the evidence was sufficient to justify this statement, though, after thinking over the case, I cannot see what else could have given such findings. True it is that many a practitioner gives a positive diagnosis based upon symptom-complexes much less trustworthy.

A nurse who had been in attendance on several cases of typhoid fever took to her bed, with a temperature, headache, and some slight gastrointestinal disturbances. Typhoid fever? But this patient soon became very pale and passed only small quantities of urine. A puffiness was noted under the eyes. A slight fever continued. Acute Bright's? The physician advised a blood examination, and this showed a picture closely resembling that of myelemia. The doctor then gave arsenous acid in heroic doses. The patient was seen on the street two weeks later. To the best of my knowledge, she has continued in good health since this recovery. Was this a case of leukemia? Such was the blood-picture. Suffice it to say, this was, in every sense of the word, a laboratory delight.

Now just one curiosity, and we must leave this department and turn to the sputum:

I had finished preparing the smears for examination (there were six of them as I remember) and, being somewhat pressed for time, I omitted the examination of the unstained preparations. Quickly fixing them in absolute alcohol, I stained with eosin and hemotoxylin. Then I examined the plates one by one, fairly gasping at the marked poikilocytosis and endoglobular degenerations. At first these appeared wonderful, but then—incredible and, finally—impossible. I thought long and worried considerably. At last I discovered that the bottle, bearing the label, "Absolute Alcohol," contained, in reality, a very weak solution of alcohol.

My next communication will discuss: "What Some Men Have Coughed Up."

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# The Therapeutic Applications of Bryonia

By FINLEY ELLINGWOOD, M. D., Chicago, Illinois

*EDITORIAL NOTE.—Bryonin is one of our favorites—a remedy that is not used nearly as much as it should be. In the application of this remedy, in the whole-plant form, Professor Ellingwood is an authority. His paper will be found replete with valuable suggestions for the active-principle man.*

AMONG the concentrated preparations and active principles which THE AMERICAN JOURNAL OF CLINICAL MEDICINE constantly advises, is bryonin. My experience with bryonia has been of such character, as to cause me to believe that there is no one remedy in the entire list that, when thoroughly known, will give a greater degree of satisfaction in the treatment of the conditions for which it is indicated. Further, I am also convinced that the profession know but very little about it, and as it is one of those remedies in which clinical observations are essential to determine its action, it has not been thought best by regular authorities to advise it.

This medicine is prepared from the white bryony, a climbing plant growing in northern Europe. It contains the glucocide bryonin. The tincture of bryonia is the most common form of the remedy in use.

In large doses the remedy is an active hydragog cathartic, but the physiological action of the remedy in large doses does not guide us in our selection of the remedy for clinical purposes. Clinical observation alone has taught us how to use this remedy.

I am convinced that the time has arrived in the study, investigation and application of this important remedy, when it should be given a conspicuous place in scientific medicine. The results obtained from the action of this drug, when scientifically administered, are more satisfactory—more exact and reliable—than those obtained from a large proportion of the remedies in common use.

### Bryonia Ignored in Many Textbooks

There are probably twenty thousand physicians in the United States who depend upon this remedy in very critical conditions, to the exclusion of those advised in the best-known works on therapeutics. Many of those works do not even name this remedy in their pages, while others, if they name it at all, refer to it in an indifferent or slighting manner.

Wood's last edition does not mention it at all. Blair in his recent hand-book, in which he compares the drugs of the three schools of medicine, speaks of it as follows: "Bryonia was much used in regular practice as an active hydragog cathartic, but it so frequently gave rise to inflammation of the stomach and bowels that it fell into disuse. The homeopaths took it up and developed a formidable list of subjective symptoms in the treatment of which it appeared to be of benefit."

"They have employed it," he says, "in the treatment of 'pain of a stitching, tear-

ing character, worse by motion, better by rest,' and those among them who do not practise 'high dilution' have had remarkable things to tell about it. The eclectic physicians then took it up, and have worked out its physiologic action in small doses, *and have placed its therapy upon a scientific basis*. It is rapidly coming into use among regular physicians. From rather extended personal employment of bryonia, it impresses me as a highly useful remedy."

### Physiological Action of Bryonia

In large doses bryonia is an active hydragog cathartic. It causes a fall of temperature, dizziness, delirium, cold perspiration, dilatation of the pupils, and other evidences of a depressing action on the nervous system. It may produce serious gastro-intestinal inflammation, a profuse and uncontrollable diarrhea, colic, vomiting, reduction of temperature, extremely small pulse, and collapse and death have resulted from its excessive use. The recent root is highly irritant when locally applied and capable of producing vesication.

As the members of the regular profession generally have only administered this remedy in large doses, they have obtained only the above results, which of course would condemn the remedy, and have thus missed entirely its real specific therapeutic action. Considered from a homeopathic standpoint, the indications for which it is continually advised, are represented in the physiological action of the drug in but few if any cases.

### Clinical Action of the Drug

In small doses the agent, clinically observed, seems to increase the action of the peripheral nerves, and promote free capillary circulation. At the same time it abates increased arterial tension, reduces the frequency and tonicity of the pulse, assists in the elimination of heat, and materially lessens the temperature.

Bryonia expends a large portion of its beneficent influence upon the *serous and synovial membranes*, acting upon these in a way similar to the influence exercised by aconite upon the mucous membranes, and I think through a similar influence upon the peripheral nerves. At the same time, *it acts upon the viscera enveloped in the serous membranes*. This accounts for its direct influence in the various forms of enteritis, in bronchitis, pneumonia and bronchopneumonia, and in inflammations of the glandular organs.

We have but little if any use for the remedy in large doses; its full medicinal effect is obtained from comparatively small doses, always short of any irritating or depressing influence. It will be sufficient to prescribe 20 drops of a good tincture in four ounces of water, and of this to administer a teaspoonful every half hour or hour. So administered it increases exudation from the skin, reduces the temperature, abates the inflammatory action in every phase of its process; it promotes absorption of inflammatory products, whether they be serous or sanguinous; it opposes the breaking down of tissue and antagonizes the formation of pus. In fact it retards exudation, and hypertrophy, all of which result from inflammatory action, and hastens resolution.

### Therapeutic Uses and Indications

Bryonia is distinctly a "fever remedy," when the fever depends upon acute inflammatory action. At such a time, it has a distinct advantage over aconite, because it does not depress the heart or the circulation, and can therefore be continued for protracted periods, not only through the sthenic stage of the inflammation, but far into the asthenic stage, with beneficial results.

While bryonia does not stimulate mucous secretion to a pronounced degree, it promotes normal tone in the mucous glands, and thus opposes or prevents the dryness of mucous membranes during inflammatory fever, due to suppression of secretion.

No remedy is more plainly, more *specifically*, indicated than bryonia. It is indicated in acute inflammations in the chest where there is a hard, quick pulse, with a short, harsh, hacking cough, also where there are acute, cutting, pleuritic pains increased by inspiration, or where there is a bright flush on the cheek, especially upon the right cheek.

It is also indicated in inflammation of any organ or structure covered by the peritoneum, where there is tenderness on pressure, with acute, quick, cutting pains through the organ. It is of peculiar value in inflammation of the synovial membranes of the joints, with soreness or pain upon movement, and acute cutting pains from any cause. The homeopathists lay all stress upon the symptom of "pain induced or increased by motion." They call this a keynote for the remedy.

Scudder gave as a peculiar indication, a hard vibratile pulse with supraorbital pain, extending perhaps to the basilar region. In all cases where pain is present as an indication for bryonia, if heat is applied, and other essential measures applicable to such cases are adopted, bryonia can be depended upon to control the pain quickly and satisfactorily.

#### Great Value in Visceral Inflammations

It will thus be seen that this remedy is of peculiar value in the treatment of acute inflammations of the thoracic viscera, of the pleura, of the peritoneum, of the abdominal viscera, and of the joints. Uncomplicated cases often yield to this remedy alone; but in many of the severe cases the indications for aconite will be plain, also, and no two remedies work more harmoniously together than do these two. They may be either combined or given in close alternation.

In pleuritis its indications are usually all present. Uncomplicated cases will yield to this remedy alone. Usually more rapid results will be accomplished by alternating it with aconite or with asclepias tuberosa. It must be continued if effusion be present.

In bronchitis, with short, quick, harsh cough, with short, sharp pains, especially if the sputum be bloody or frothy, bryonia acts directly. It should be persisted in. It will subdue pain and the cough promptly, and will exercise as marked an effect upon the fever as any special sedative known.

#### Positively Indicated in Pneumonia

In pneumonitis it is usually positively indicated. If used in combination with other specific remedies, abatement of the symptoms will be even more rapid in these cases. Although opposed to complex medication, the author has used the following combination in these conditions in infants and children with most happy results. The two prescriptions should be given as specified in alternation. In severe cases, in small children, or during severe paroxysms, it is very desirable to give yet a smaller dose and alternate the remedies every twenty or thirty minutes. Results will be apparent from close alternation in cases where no results are observed if the doses are given farther apart. The first combination is as follows: Tincture aconite, minims 5; tincture belladonna, minims 8; distilled water, ounces 2. Half a teaspoonful every hour, alternated with the following prescription every half hour.

The second prescription contains the following: Tincture bryonia, minims 8; tincture ipecacuanha, minims 4; distilled water, ounces 2. Half a teaspoonful every hour, alternated with the above as stated every half hour.

Auxiliary measures should be adopted, as the character of the case suggests.

In peritonitis with quick, sharp pain, flushed face and anxious countenance, bryonia is indicated. This agent, in mild cases, will subdue all the inflammatory processes and control the pain most satisfactorily, usually without opium. Auxiliary measures, however, should not be neglected. In any case, when indicated, bryonia can be continued to most excellent advantage when the results of inflammation are extreme, and when weakness and prostration are present, when aconite would have a depressing effect and would be contraindicated.

In acute pericarditis and endocarditis the specific indications for this agent are often present, and its influence is prompt. It will be of great service if there is effusion, with evidences of decreasing power of the heart. In acute rheumatic inflammation of the heart or of the pericardium, it is one of the most direct remedies. Properly combined with indicated auxiliary measures, no remedy will act more satisfactorily.

It is thus of much value in typhoid conditions, especially in pneumonitis with typhoid complications. In typhoid fever with severe enteric symptoms this agent is often of great service in restraining the retrograde processes and controlling excessive temperature. In septic fever its influence is marked and valuable. In septic peritonitis alternate with aconite.

Bryonia is indicated in rheumatic fever and in acute arthritis. It must be given, as in other acute conditions, in small doses frequently repeated. In muscular rheumatism and in rheumatic muscular pains it will accomplish good results if given in conjunction with cimicifuga and aconite. In acute rheumatism of the joints of the fingers or hands, it seems of special value.

It is used in inflammation of the liver, with its direct indications. In many cases of acute jaundice these indications will be found present, and its action will then be most salutary. In mastitis or orchitis it is useful. If the fever be high, the pains sharp and cutting and the face flushed, the influence will be prompt indeed. In these cases it is given usually with aconite, phytolacca or other direct remedy.

This remedy has recently been brought forward as a specific in the active stage of the various forms of acute meningitis. I have had no opportunity recently to try it, but I am assured by those who have that it will often promote the desired results in a prompt and satisfactory manner.

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[This is a masterly presentation by a man who *knows*. If we could only persuade Prof. Ellingwood to use bryonin, aconitine, emetine and other *exact* drugs ——?—ED.]

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# Triple Operations on the Nose and Throat

## *The Use of the Crushing Method*

**By F. E. HUFNAIL, M. D., Minneapolis, Minnesota**

TO place suitable, mechanical, and remedial agents in the hands of the average surgeon, that he may forestall involvement and septic states of the ethmoid and frontal sinuses, should be of interest to many. Before going further you are referred to pages 621 to 626 inclusive, also the discussions following, in the August issue of *The Journal of the American Medical Association* of 1911, wherein detailed reports and liberal criticisms were made, and where Drs. W. E. Sauer, A. H. Andrews, and J. H. Bryan tell of their experiences, successes, and objections to the Ogston, Luc, and Killian methods.

Experienced and capable operators, like these, should and do command our respect, but the prevention of such serious and dangerous operations lies with those who are first consulted, or who would be consulted if proper attention were paid to earlier stages of acute inflammations, malformations, and primary infections, dating back to first attacks of rhinitis, adenoid growths, and tonsillar infection; and to circumvent the frontal-sinus disease is the object I have in view in presenting this report, covering several years' trial with most favorable results.

The anatomical structures involved are well known and need no explanation.

Usually a patient is presented to the family physician for minor throat and head troubles or eye-strain, facial neuralgias, and a variety of conditions involving the nose and throat. This is the time the physician should make a careful examination by fully exploring the nasal channels and oral cavities, and if the conditions there do not quickly and entirely respond to the usual treatment, especially when there are suppurating crypts and adenoids together with permanently hypertrophied lower turbinates, an operation is the expedient which will prevent sinus involvement later, often with serious results.

In making the examinations, cotton, well oiled and fastened to a pliable alumi-

num applicator, is introduced gently into the nasal openings alternately, and the location, size and extent of probable disease of the lower and upper bodies is ascertained—no anesthesia being used. After having completed your examination and satisfied your mind as to the needs of the case, locating the growths to be crushed (remember in this method there is no removal of the turbinate bodies), the patient is ordered to the hospital the night or morning before the operation. After the patient has had his bowels evacuated, taken a cleansing bath, and gone without food, the operation is performed, causing as little suffering to the patient as possible and not marring the normal surrounding structures, and not inconveniencing the patient later, allowing him to leave the day or morning following—a night's rest being preferable.

#### Procedure in a Triple Operation

The anesthetic used, when a triple operation is performed, is chloroform always. Where adenoids and one or more turbinates are operated upon, somnoform will be found satisfactory, being administered by a competent assistant.

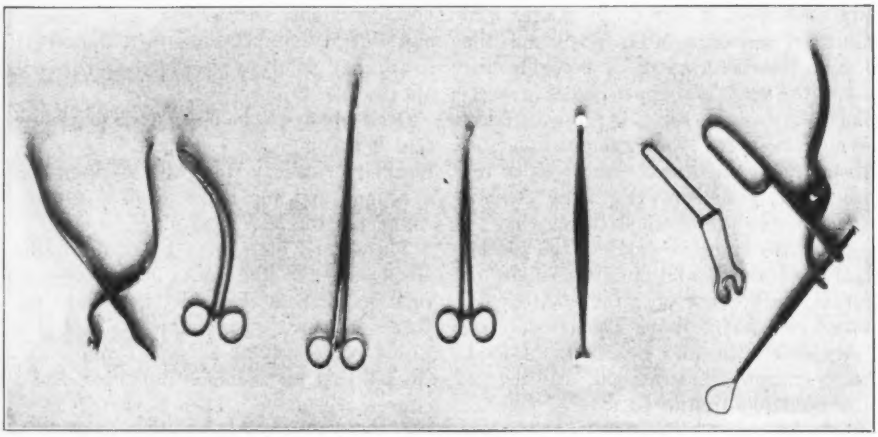
Having the patient ready, stand upon his left side, lower the head, focus the light in the throat, begin upon the right tonsil, free the capsule from the pillars if you can, have your assistant ready with the snare, slip your tonsil vulsellum-forceps through the snare-loop and force the loop down gently as low on the tonsil as desired. Use a curved uterine dressing forceps to aid in pushing the loop down; be *very positive* there is none of the adjacent structure nor the uvula in the loop as you close it. This is the real trying part in removing tonsils and one sorely neglected.

Where it is impossible to get a satisfactory looping because of malformations deeply imbedded, friable tonsils or persistent vomiting, discard the snare, introduce the index-finger of your left hand, and at the inner lower border of the capsule it will rupture readily. Enucleate it quickly. Then turn to the left tonsil, snare it if you can; if not, treat it, as you have the right one, by enucleation. For whatever nodules or broken pieces you wish cleaned out, use a T-curved forceps with fine, short teeth; they get these pieces free and are not apt to cause injury.

Occasionally the hemorrhage is so profuse that it becomes necessary to compress the tonsillar arteries. Have the assistant use a sponge and his finger until you have completed the last removal.

The second step is to break down the adenoids. Use the index-finger of your right hand, pass it rapidly back into the posterior nares, using the wall of the throat posteriorly as a support and guide. Go up past all adenoids until you feel a clear space above. Then hook the finger toward the soft palate down and out, crush everything of a spongy consistency, with all possible speed, yet do not be careless; but speed is essential, for you are leaving a very bloody field behind you, with a far worse one to encounter ahead, and your patient is fast recovering from the anesthetic. Your assistant stands ready with the crushing forceps (one especially invented for this very purpose). You pass it into the right nasal cavity, with the back of the long blade pressed close, not too hard, against the septum and back into the posterior nares, often crushing the lower turbinate slightly as it enters. Once in position, you close down sufficiently to crush it completely. The changeable plate, regulated by a fixation screw attached to the upper swan-neck blade, being adjusted to the right side, when both sides are to be crushed, reverse the plate and proceed as before. This constitutes the crushing method.

If the middle turbinates are at all involved, as is so frequently the case, the rounded, curved, blunt end of the lower blade is brought into position at the time you crushed the lower one, and you crush the middle one; then, as time is yet required to curet a portion of these crushed bodies (your assistant stands ready to hand the curet, so work fast, to prevent too great loss of blood), curet sufficiently to admit of a free passage large enough to prevent subsequent closing up, yet not enough to cause any malformation or opening into the antrum, nor to destroy



The instruments employed by Dr. Hufnail

so completely the membrane that it will not at a later date again perform its function, which is to moisten the air as well as modify its temperature, and finally permitting a partial recovery of the sense of smell. This curetting finished, the third step in the operative procedure is ended.

### Controlling Hemorrhage

Hemorrhage usually is quite startling, but it can be readily controlled by the simple application of a saturated cotton tampon applied with your long dressing forceps direct down and through the nose, pressed against the denuded surfaces, and repeated until you have controlled the outpour. For this the sulphuric solution of iron is used. The one preferred by me is manufactured by Lloyd Brothers. However, any other of the same quality, of course, would do as well. You cannot be too thorough with this in applying it to the raw surfaces, tonsils and adenoids as well, for it has the peculiar action of coagulating the blood without hardening it. It soon begins to loosen and to come out as a dark, waxy substance, leaving a soft surface, which soon granulates and heals over; shrinking gradually to a stage where it remains. Yet the scar is elastic and will not dry or parch, as is often the case in older methods.

The patient has an ice-pack placed over the bridge of the nose for a few hours, to prevent more swelling or hemorrhage, while it also relieves pain.

When the iron solution is first applied it bites severely, but coagulation takes place so rapidly and the after-effects are so beneficial that there is no objection to it.

### After-Treatment

Upon the following day the patient calls at your office, and with the use of an applicator and cotton all the coagula can be easily removed. After this is done an application of a salve made purposely for these cases is applied. Its composition is as follows:

Fluid extract of lobelia....drs. 3
Fluid extract of calendula..drs. 3
Menthol crystals.....grs. 10
Boric acid, powder, enough to make a thin paste
Vaseline, white (Wyeth's), enough to make an oily salve.

The patient is given a jar of this salve, some cotton, and an applicator, and is told to apply it three or four times a day until well.

Satisfactory reports are encouragingly in favor of the method here detailed, and that is the excuse for this minute description. There is no intention to favor any special drug, but only to show the necessity for some remedy that will produce the desired results. If a report has any virtue it is because of the success, upon trial,

which could not be expected unless the operator has given step by step the method employed—that has been my idea here. No part has been omitted, even at the risk of adverse criticism.

The reason for the display of instruments is a twofold one.

No. 1 is the crushing turbinate forceps invented especially for this method. The remaining ones show no free cutting edges, and the number necessary to operate is very few.

In closing I would gladly, if I could, indelibly fix in your minds the unquestionable danger of using sharp, pointed, and open cutting-edge instruments in this method. They are unnecessary, and that more fatalities do occur than are recorded, all who are familiar with this work can testify. I have seen some and know of several, and to abolish the employment of those instruments would be a great accomplishment.

# Electrotherapeutics for the General Practitioner

## *Why He Should Make It a "Specialty"*

By HOMER C. BENNETT, M. D., M. E., Lima, Ohio
Secretary of the National College of Electrotherapeutics

*EDITORIAL NOTE.—Dr. Bennett has promised us a connected series of articles on electrotherapeutics. His skill as a writer and his experience as a teacher—principally by correspondence—insure something thoroughly worth the reader's while. We congratulate the members of the "family"—and ourselves on securing these articles.*

SPECIALISM is the order of the day. The time is past when one man can do it all. In this era, the doctor, to succeed, must excel in something. He must know something about everything, but must try to know much about some one thing. That branch to which he is attracted will be the one to which he will devote most study, and it will be naturally followed up; and if he masters the details and technic of that branch, then he will have the best success with it, and this will eventually become his specialty. Sometimes a specialty is forced upon a physician, against his will, by circumstances; still, most physicians are at liberty to select that special line of study most congenial to their respective tastes and best adapted to their ability and field of work. The physician should first, however, have the invaluable schooling that is only acquired in general practice and without which the specialist is handicapped; hence, specialists are not made all at once.

Electrotherapeutics is now firmly established as a branch of medicine. Electrification has its uses but also its limitations as a remedy. It is not a cure-all, but when scientifically applied in selected cases, it will do things that nothing else can accomplish. The chief danger in the use of electrotherapeutics is not the agent itself, but in the person applying it. If ignorantly orcarelessly employed, it may, and often does, do harm, and brings disappointment; whereas, if rightly and intelligently used, it gives uniform satisfaction and brings success.

It is an axiom that a power for good when rightly used is as great a power for harm when wrongly used, in proportion to its potential, and this applies strongly to electrotherapeutics. Electrification must not be applied by guess. The laws of its operation must be understood; therefore a preliminary education in electrotherapeutics is an absolute essential to success. Correct technic is everything.

There are many doctors who have the idea that all that is required is a battery and a few directions. There is just as much sense in this belief as there is to say that all that is required to make a doctor is a stock of drugs and a few instruments.

It is just as necessary to understand the physics, chemism, and physiologic effects of electrification, as it is to understand the same of any drug or other remedial agent.

Doctors are rapidly awakening to the fact that they must have something besides a battery, and must have at least a working knowledge of it and its uses. This knowledge can be obtained by experience, study, and experiment—but at what cost of time, money, and disappointment! Many books on this subject are to be had, of more or less value to the operator, but most of them of more value to the specialist for purposes of reference.

The majority of physicians are too busy to leave their homes and practice to take a special course, yet they feel the vital need of more knowledge in electrotherapeutics. They are busy and have little or no time to devote to experiment, and the knowledge to be gained from the average textbook on the subject is, to say the least, unsatisfactory. For this reason, there is absolute need for a simple, practical mail course of instruction in electrotherapeutics, which the busy doctor can take at home and which at the same time will give him just the information he needs concerning the apparatus to be used, the nature and effects of the different modes and the simple facts plainly stated, in order to guard him against mistakes and guide him in the right direction in medical electrification.

To this end, arrangement has been made by which a series of short practical talks will be published in this journal, so that the readers of CLINICAL MEDICINE may, from month to month, learn the underlying principles and fundamental laws forming the basis of the science of electrotherapeutics. These articles will take up briefly the physics, chemism, and physiology of electro-, photo-, radio-, and magnetotherapy, and they will be illustrated when necessary to aid in the instruction.

### It Certainly is Worth While

The question is often asked by general practicians whether the ends will justify the means, whether it will pay to equip themselves with proper batteries and adjuncts to be used in their general practice. To such we reply that, if once they become familiar with the use of electrification and will employ it with the same care as they do any other remedy, the ends will *always* justify the means. A good battery is one of the best assistants the busy doctor can have, and when once he begins to look for opportunities for applying it, he will never cease finding openings where it will be of great assistance to him, both professionally and financially.

The general practician can make a specialty of electrotherapeutics without necessarily confining himself to it as a specialty. The great majority of the alumni of the National College of Electro-Therapeutics are busy general practicians, many of them in country practice. We have in mind one doctor, over sixty-five years of age, doing a general practice in a village of only seven hundred population, who has an office equipment of electrotherapeutic apparatus costing more than one thousand dollars and which he has made to pay for itself many times over within the last few years. At present he is busy all the time in his office, having relegated the outside work to his son. We know of other doctors equally well equipped in locations ranging from small villages to large cities, all of whom are succeeding in electrotherapeutics.

The field of application is so large and the indications for the use of electrification as a remedial agent are so plentiful, while the results following its use are so satisfactory, that when once in the field, those trying it invariably continue its use. One of our students became so enthusiastic recently that he wrote he had decided to abandon the practice of medicine entirely and to devote himself exclusively to electrotherapeutics, as he had found a remedy that would meet all his needs. We were sorry to do it, but we had to throw a cold blanket over his enthusiasm, because electrification is not at all a cure-all, and will not take the place of all other remedies, but should be used in conjunction with other means of treatment wherever and whenever indicated, only applying that agent when it seems most indicated, just as you

would any other form of treatment. Enthusiasts are all right, but sometimes they overdo things and make promises they cannot fulfil, thus frequently disappointing themselves as well as their patients. A wise discrimination is necessary to successful therapeutics.

The day, however, is coming when the true physician will not be hampered by a limitation of schools, "pathies," "isms" or narrow dogmas, but will, like the busy bee, gather honey from all the flowers and appropriate and use the best from each. In other words, the coming doctor will treat his patients with whatever he thinks will relieve or cure most safely, quickly, and pleasantly, whether it be drugs in large or small doses, or no drug at all; whether mass or active principle; whether massage, electrification, light, heat, vibration, diet, bath, hygiene, exercise, rest, suggestion, sunshine or moonshine.

The doctor who is not informed about electrotherapeutics, naturally will rarely see any indications for its use, while the one who is well acquainted with its properties and powers will always be finding cases in which it can be applied with great advantage, as there is scarcely any limitation to its usefulness in some way or other. In this rapid age, where most of us are nervous dyspeptics, electrotherapeutics has a great field for usefulness. The combination of nervous unbalance, termed "Americanitis," especially calls for the soothing application of electrification, to restore the normal equilibrium.

### What Is Electricity?

The question, what is electricity, is often asked by the unthinking and the thinking alike. It never yet has been definitely answered. Many theories have been offered, all with some points in their favor, but none of them is of any practical value to us. Occasionally we are amused by someone announcing having made a "discovery" (save the mark!), claiming to have found out at last what electricity is, and he either guards his secret (?) closely or else offers a very old and confusing job-lot of meaningless words as a definition. So do not be afraid to show your ignorance as to what electricity is, for you are in very good company, seeing that the wisest of men do not know.

While we do not know what this mysterious thing is, we do know and can tell what *it is not*. Electricity is not a tangible entity. It is not an energy, as many claim. Electricity is a condition. Electrification is an energy, or manifestation of the electric condition; and we know some of the laws governing electrification, and can, by following these laws, bring about some manifestations of electrification and get certain results.

Upon this hypothesis, which to us seems the most plausible—namely, that electricity is a condition, and that electrification in its various modalities (that will be taken up and studied in detail later) is the manifestation of this condition—let us proceed to study the different phenomena of electrification, and learn the laws governing the production or causation of these phenomena.

The electric condition is universal and pervades everything, and as such it differs from matter, whose existence we recognize by one or more of our special senses. This condition is not an entity, it is imponderable, and, while pervading everything, has no dimensions. It is through the manifestations of certain phenomena, only, that we realize the reality of this condition; and it is these phenomena that we appreciate by our senses. Electrification is the energy operating to produce these phenomena, and this electrification acts according to certain fixed laws.

It is the study of these laws of electrification which it is our pleasure to place before the reader in these talks. These laws are simple and the principles of their operation are easy of comprehension. Then, these laws being fixed, and we knowing them, we can, by bringing about certain conditions, invariably cause certain effects. It is upon the laws governing the production of these phenomena that the science of electrotherapeutics is based, and these laws must be known and followed in order to achieve success.

When electrification is in perfect equilibrium, no phenomena are manifest; but

when this equilibrium is disturbed, we note the operation of the fixed law of physics which says: "For every action there is an opposite and equal reaction."

There is ever present in this phenomenon the tendency toward an equalization of balance, the same as water seeking its level. It is upon this that we base our belief of a difference of potential between the two poles. We do not know whether there is a transference of energy in the form of a current, like water flowing down hill, or whether it is in the form of a wave, or whether it is merely a transmitted impulse.

For the sake of convenience in our work we speak of this phenomenon as if it were a current of energy flowing through media known as conductors, or held in check by other media termed insulators. These will be enumerated in detail later in these talks.

For convenience we say that the side having the higher potential is plus, or positive; and the opposite side having the lower potential is minus, or negative. And, again, for the sake of simplicity, we shall speak of electricity—the generally accepted word—as being the same as electrification, so that when we say "electricity," please know that we refer, not to the electric condition, but to the manifestation of it.

### The Four Classes of Electrification

Electrification may be divided into four classes, according to the various phenomena of manifestation, as follows, in the order named: (1.) Electrification in motion, or dynamic. (2.) Electrification at rest, or static. (3.) Electrification in vibration, or radiant. (4.) Electrification in rotation, or magnetic. This classification indicates the relative importance to us.

We will consider the most important phase first, that is, the dynamic. This generally is spoken of as being of two forms, or modes, viz., galvanic and faradic—these appellations being proper adjectives and applied in honor of Galvani and of Faraday. The proper terms to use would be "constant" and "induced."

The constant mode is unidirectional, with a fixed polarity, while the induced mode is an interrupted and alternated mode, with no fixed polarity.

Under the head of the constant, may be placed the cautery mode, while under the induced, we class the sinusoidal and the socalled high-frequency modalities.

The franklinic (named after Franklin), or static, as commonly called when in effect, is also unidirectional, with a fixed polarity. This has a modification in the static induced, which, while being an interrupted mode, differs from the faradic in having a fixed polarity which is always the reverse of the primary, or inducing, mode. We also get a high-frequency, or oscillatory, modality from the static.

Commercial incandescent light and power modes can be utilized for purposes of therapeutics, but they differ in no way from the other modes, except in the method of generation.

The constant, or galvanic, mode is spoken of as galvanism, and its application, as galvanization.

The induced, or faradic, mode is spoken of as faradism, and the application, as faradization.

The static mode is spoken of as franklinism, and the application, as franklinization, or insulation.

The vibratory, or radiant, mode, when applied to the treatment of disease, is designated as phototherapy, or light-treatment, and this term is applied to the therapeutic use of any form of light; but the term is most often given to the Roentgen-ray, or x-ray, which, when utilized therapeutically, is known as the x-ray treatment, or roentgenism, the application being called roentgenization, or x-raying, or radiation.

The rotating, or magnetic, mode is known as magnetism, and the application is called magnetization.

### Ohm's Law

In the erection of our system of practical electrotherapeutics, we wish to have a bridge to carry us over hard places. The keystone of this bridge is most important if we would know and understand fully, and it is the law of Ohm which enters into the consideration of every therapeutic application. The foundation of our bridge is based on three things, or units, which

we use as measures of pressure, of strength, and of resistance, and these units are named in honor of the labor and study of three eminent physicists—Volta, Ampère, Ohm.

*Voltage* is the push, pressure, head, or electromotive force which drives.

*Amperage* is the rate of flow, or mode-strength.

*Ohms* represent the opposition encountered, that is, the resistance offered to the flow of mode.

For the sake of convenience, we say that the *volt* is the unit of electromotive force, or drive; the *ampere* is the unit of mode-strength; the *ohm* is the unit of resistance.

Dr. George Ohm formulated a definite statement, this being based upon the experiments, measurements, and observations concerning these units, and this is known as Ohm's Law.

He demonstrated that the strength of a mode flowing through a conductor was entirely dependent upon the pressure behind it and the resistance in front of it, being directly proportional to the drive and inversely proportional to the drag.

He formulated a proposition that says, that it requires one volt of pressure, or electromotive force, to drive one ampere of mode-strength through one ohm of resistance, in one second of time. However, inasmuch as time element is not an important factor, we may here omit it from our consideration of the subject.

In simple language, the *Law of Ohm* is this: "The mode-strength (amperes) is equal to the electromotive force (voltage) divided by the resistance (ohms). Thus:

$$\text{Amperes} = \frac{\text{volts}}{\text{ohms}}, \text{ or mode-strength} = \frac{\text{Electromotive force,}}{\text{Resistance}},$$

or to make the formula still more simple:

$$C = \frac{E}{R}$$

### How Electrification Acts

The effects of electrification on the body-tissues are accomplished in three different ways, as follows:

1. By phoresis, which is mechanical.
2. By electrolysis, which is chemical.
3. By catalysis, which is physiological.

Electrolysis is a chemical effect, which is produced by the galvanic mode only.

Phoresis is a mechanical effect, which is produced by the galvanic and static modes only.

Catalysis is a physiological effect, which is produced by all of the different modalities—galvanic, faradic, static, magnetic, and radiant—and on account of its widespread distribution is the most important effect of electrification.

In the following monthly talks we will discuss these three processes, in the order of their importance, which is the reverse of the order numbered and named above.

**CHANGE your mind. It's a good habit. That doesn't mean to vacillate, to hesitate or to dubiate, but—give your mind a rest, a change of air and of mental environment. Suppose you went for a year without a bath—well, on the second thought, let's not. But just the same, that's the sort of treatment you give your mind when you grub along at the same old grind, day after day, week after week, and month after month. It gets scaly. The pores are stopping up. Your outlook upon life is cramped and unnatural. Change your mind. It pays. Many a man has gone for a day's fishing, and come back with no fish but with a big successful business-building idea.—Texas Courier-Record of Medicine.**

# The Medical Situation in Europe

## *Is It the Handwriting on the Wall?*

By MAYNARD A. AUSTIN, M. D., Anderson, Indiana

II

### Prospects in England Not Promising

THE condition in England, where living more nearly accords to that in America, shows much that is disquieting to our future. In twenty years the multiplication of physicians has made the ratio of physicians to population decrease from one in seventeen hundred to one in fourteen hundred. In similar thickly settled communities in the United States the proportion is as low as five hundred inhabitants to each physician, but it must be remembered that the average American is a freeholder and the average Briton a person of a small resource.

It is not to be wondered at, since the greatest exponent of cooperative success is to be found in England, that the doctor should be made to give his services for little profit. In England friendly societies corresponding to our various fraternal organizations in this country offer membership in all their lodges, with free medical service as one of their conditions. The multiplication of societies has been the result of envy and strife, while competition among lodges has reduced their operating expenses to a minimum and the lodge-doctor has received the greatest attention in the way of reducing the price of his service.

*The British Medical Journal* of February, 1909, gave a report of a conference between the British Medical Association and representatives of the various friendly societies. A large mass of statistics was presented, and, as an example of the situation, one lodge alone—The Manchester Unity of Odd Fellows, with a membership of over 600,000, engaged in all varieties of occupations—averaged two and one-third weeks' illness per member annually, and the remuneration paid out for medical services averaged a dollar and a quarter a year. This means that the lodge-doctor looking after the various members of this one order received one dollar and a quarter for seventeen days' medical service and attention, and, counting one visit a day, the doctor's services were worth seven and a half cents a call, which included medicine and surgical dressings. This one lodge is representative of all the other friendly societies. Recently, however, some of the societies have been complaining of the character of the services rendered by their lodge-physicians and statements have been made that the supply of available good men was rapidly diminishing.

Following Germany's example, sick-benefit and working-men's insurance legislation has gradually invaded nearly every country in Europe. In some it is compulsory with all the laboring class having incomes under a certain sum. This limit is the lowest in Finland, where it is $150 a year, and highest in Luxemburg, where it is $750. In Norway it is $390, in Germany it is $500, and in France only one class of workmen have compulsory insurance, these being the miners.

### The Pending Lloyd-George Comprehensive Benefit-Bill

Now comes England with a bill that offers to do more than has the legislation in any other country in Europe, not only to socialize the medical profession, but in that it also offers, in addition to the sick-benefits and accident insurance, to provide for nonemployment.

The Lloyd-George Bill provides for a stipulated contribution from every workman or woman earning less than $800 a year. This will include approximately 14,000,000 people, and their contributions will be from two to eight cents a week, a similar sum to be paid by the employer, to which the State will add an equal appropriation. At present in England 6,000,000 people are being furnished medical attention through friendly societies at a cost of $1.25 a year. The Lloyd-George Bill provides

a little more munificent reward to the doctor, in that it provides for a capitation fee of $1.50 a year. *This leaves in England only a little more than a half million people who could be expected to pay more than $1.50 a year for their medical attention.*

The bill provides for medical attention in illness, and also for a maternity benefit of $7.50. Sick-benefits of $2.50 a week will be allowed for three months, and after that, $1.25 a week for another three months. If permanently disabled, they will be given a pension of $1.25 a week. The bill also provides for an unemployment benefit, amounting to $2.00 a week for one-fifth the number of weeks that the insured has been a contributor to the fund. This is not to apply to dismissals for misconduct, strikes or lockouts.

Since the bill was presented to the House of Commons, the British Medical Association has held a special meeting and, among other things, adopted a resolution favoring reducing the income limit from $800 to $500. Many representatives were at the meeting who contended that the work of the majority of the profession was a struggle for existence, doing work for those with a meagre income, and that many in private practice, not subservient to the friendly societies, make visits for twenty-five cents and furnish medicine, and make an office-charge of twelve cents for advice and medicine. This legislation, if passed, will take the entire lower class and middle class patronage out of private practice and leave an average of twenty private paying families to each practitioner. This means ruin to many.

### As to the Conditions in the United States

In the United States we have a much different situation to deal with, in that the average earnings of the laboring class are more than double those in the countries named. In some instances and in some trades, the workman in America receives fourfold for his time and labor as compared with his fellow workman in Europe. Living expenses in this country of course are higher than in England or on the Continent, but the margin of difference between earnings and cost of living would permit the average American family to have a surplus at the end of every year, were it not that they use up this surplus in buying luxuries that are ill-advised for people of their circumstances.

Recently I was solicited to do an operation, as an act of charity, for a woman suffering with gallstones. Investigation showed that these people had a fine piano and many other articles of luxury leased on the installment plan. Probably no other thing has conduced to make the average American family fail to provide for the rainy day or for the misfortune of sickness and death than the change from a cash to a credit business. Installment houses solicit trade and induce the dependent classes to buy useless and unsuited articles of luxury, charging usurious prices; for the deferred payment often doubles the price that the same article could be purchased for with cash.

The laboring classes of our country are becoming fatalists in their cheerful attitude that the world owes them a living and realize that our social fabric is so constructed that few of them, or none, suffer from hunger or for want of shelter. The food, clothing, and surroundings in the average municipal charity-home or asylum is luxurious in comparison with that which the honest laborer with a large family can afford. This latter personage brings us back to a situation justifying contract practice.

### Speculations on Contract Practice

The three forms of contract practice are: First, those between a physician and an individual; second, those between a physician and a corporation or business organization; third, between a physician and an organization established for social or fraternal purposes.

As the very rich can afford to employ a physician and demand his entire time at a commensurate salary, so should any man be given an opportunity to purchase the services of a physician the same as he purchases indemnity against illness or accident. The cost should vary according to the income of the individual and the risk involved in his occupation together with a

consideration of the hygienic surroundings while at work or at home. A careful analysis of ten years' personal work and information gathered from friends in the profession would let me say that the expense of illness in the average family in the average community would not exceed ten dollars a year. While numbers of large accounts are on our books, yet we have many families, still our patrons, whose ten-years' fees are extremely small. This considers only medical services, and not the amount paid out for patent medicines.

As a basis for computation, the earnings of a family, the number of members in the family, and their ages must be taken into consideration. Haphazard guess-work is not indulged in by insurance companies, and can not be used by the medical profession to work out an equitable fee bill.

The following suggestions have been arrived at after some more than casual study of the situation. A physician can afford to contract his services with an individual for a period of not less than one year, his fees being paid quarterly in advance and computed after considering the following factors:

1. Financial responsibility.
2. Income of the family.
3. Number in the family.
4. Children under 14 years.
5. Children over 14 years.
6. Occupation.
7. Sanitary conditions.
8. Family history in regard to tuberculosis, rheumatism, cancer, heart and kidney diseases.
9. Habits in respect to the use of tobacco, alcohol, and drugs.

Where the income is $500 or less a year, the fee should not be less than two percent, with a dollar extra for all children under fourteen years of age. Those over fourteen should not be included, except with an extra compensation, because they are customarily wage-earners themselves. This would usually average near three percent, including all children. Where the family income is over $500 and under $1000, two and one-half percent would be a fair fee.

As we come in contact with those earning over a hundred dollars a month, we find a lessened demand for the doctor's services, because of their ability to live better and take better care of themselves. Hence a less rate could be charged, but at no time should a physician value his services at less than two percent of the income of the family for whose lives he is responsible.

The question of special service in obstetrics, surgery, and attention of a specialist can best be provided for in an organization of not less than four physicians, wherein each could qualify himself for some special line of work.

The Halcyon days of the specialist are rapidly nearing an end, the higher qualifications and superior training of the average practitioner making him competent to do much that was formerly turned over to the former.

The hazard of life in the past has been merely a problem in evolution, the survival of the fittest. The problem of the future will be physical perfection from economic necessity. A fool may criticize, but it requires wise men to find remedies and to apply them correctly. To do these latter is not a matter of days, but years, and as our experience broadens, other conditions will arise that will reveal to our wise men the star whose light will brighten the future of that army of self-sacrificing individuals that compose the medical profession.

# Golden-Seal Culture as a Business Proposition

By J. M. FRENCH, M. D., Milford, Massachusetts

THE medicinal use of hydrastis canadensis, or golden-seal, has increased very rapidly during the past few years, and seems to be still increasing. This is due, no doubt, to the growing appreciation of the value of the alkaloids hydrastine and berberine. Except among the eclectics and herbalists, the root, with its galenics, is not extensively employed.

Owing to the increasing use and the consequent growing demand, the supply of the wild root has already been to a great extent exhausted, and it is no longer possible to supply the legitimate demand from this source, which each year is yielding less and less.

The prices have gone up proportionately with the increasing demand and the growing scarcity of the wild plant. Not longer ago than in 1895 the market price for dried hydrastis root ranged at from 17 to 23 cents per pound. At this writing (January, 1912) the ruling price is $5.50 to $6.00 per pound, and the tendency is still upward.

Only a large supply of the cultivated root will be able to supply and continue to supply the increasing demand. The United States government has recognized the need of an additional supply, by instituting a series of experiments in hydrastis culture by the Bureau of Plant Industry and publishing the results for the benefit of the public in its bulletins; the latest of which the writer has any knowledge being published in June, 1908. This probably can still be obtained on request.

### Some Pertinent Questions Involved

In this connection, certain questions present themselves, and the widespread interest which has been manifested on the subject by medical men in all parts of the country suggests the propriety of considering some of them in the columns of CLINICAL MEDICINE.

Is it possible to produce this plant of good drug quality and in quantities and at a cost which will make it profitable commercially, by means of artificial cultivation?

If so, what and how extensive is the area in which its cultivation can successfully be carried on?

What are the conditions of soil and climate essential to its successful cultivation?

What are the practicable methods to be employed in its culture?

What is the cost of cultivating it, and what profit may be expected?

These questions can best be considered together, and without being limited strictly to the special points mentioned.

And first it may be said, answering all the questions collectively, that the great need at present is for experimentation on all these lines. No one has as yet cultivated hydrastis root for a great many years or on a very large scale.

Desiring information on these points, I wrote, a number of years ago, to various parties interested in the cultivation of the plant, and was guided to some extent by their replies.

From E. R. Squibb & Sons I received a somewhat pessimistic letter, to the effect that they hardly thought it would pay to cultivate the plant, as it required much attention and apparently yielded but a small return. The experiments which they themselves had made in attempts at cultivating it had not been very successful. Its natural habitat, they said, is in northern New York, Pennsylvania, Ohio, and Indiana. They saw no reason why it might not be grown in Massachusetts as well as in the other states mentioned, and desired to know what success I might meet in cultivating it, should I undertake to do so.

From Lloyd Brothers I received a much more encouraging reply, they saying that the root was being cultivated quite freely, and they were advised of several parties who were meeting with success, although

their efforts were so recent that they had not yet marketed the root. John Uri Lloyd sent me an account of his experiments, together with his conclusions based thereon, which were as follows:

"Hydrastis canadensis is a very easy crop to raise by transplanting the entire root. Since the root bears prolific lines of reserve-buds from end to end, any of which will sprout the year the cutting is made, it is easy also to multiply the plants the season the cuttings are made. But under the conditions cited in the experiment, the cuttings exhausted themselves by their growth that same year, as indicated by the experiment offered, which shows the great loss in number through winter killings of the feeble plants. In this connection it should be said that the experiment described was made during a year when a severe drought between the first of August and through the fall followed the transplanting. Dry weather, as much as winter conditions, tends to the destruction of the feeble young hydrastis."

The pamphlet issued by the Bureau of Plant Industry states that "the U. S. Department of Agriculture has been carrying on experiments in the cultivation of golden-seal on a small scale at Washington, D. C., since the spring of 1899, in the hope that methods might be worked out according to which this valuable drug could be grown on a commercial scale. In these experiments the aim has been to imitate the natural conditions of growth as closely as possible. The results thus far obtained seem to justify the conclusion that golden-seal can be successfully cultivated."

As to the natural habitat of this plant, the pamphlet states that it is native "from southern New York to Minnesota and western Ontario south to Georgia and Missouri, ascending to an altitude of 2500 feet in Virginia. Not all of this region, however, produces golden-seal in abundance. Ohio Indiana, Kentucky, and West Virginia have been the greatest golden-seal producing states."

Hoag, in his little booklet, "Golden-Seal as a Money Crop," states that the range of golden-seal in the United States is on the whole quite the same as that of ginseng. It extends from southern Canada on the north to the mountains of Georgia and Mississippi on the south, and from the Atlantic on the east to the tier of states on the west of the Mississippi River on the west. It is found sparingly in the New England states, except in the southwestern portion, where it is a little more plentiful. It seems to be most plentiful in Pennsylvania, West Virginia, Ohio, Illinois, Indiana, and in Kentucky, and in favorable localities in the adjoining states."

### Under Proper Conditions the Plant Can Be Grown

After a correspondence with the parties I have named, besides some others, and receiving the information which I have stated, I sent to Pennsylvania for 100 plants, and in the spring of 1907 set them out in my garden, after the spot selected had been properly shaded according to the directions given by Hoag. I carried on the experiment for three years (the time stated by most authorities as necessary for the maturing of the roots), when I was compelled to abandon the same as not a success, so far as leading to the cultivation of the plant on a commercial scale was concerned.

### Condition of the Soil as a Factor of Importance

For all that, from the more important point of view, as answering the question whether or not golden-seal can be successfully grown in New England, my attempt may be considered successful. For the comparative failure in my own case was due, not to the severe cold of winter or to lack of fertility of the soil, but to the absence of the proper degree of moisture.

This latter condition arising entirely from limited local conditions, it, consequently, has no bearing on the general question, other than as indicating the importance of selecting a proper locality in order to grow the plant successfully. Indeed, there are garden spots within a few rods of my own which are sufficiently moist for all practical purposes. The soil of my garden is naturally dry, and during those three years was more than usually so, in fact so

much so as to interfere with the raising of the usual garden vegetables of New England. The effect of the drought, so far as my little patch of golden-seal is concerned, was that the plants shriveled and their growth was stunted.

I have no doubt that in favorable localities, such as abound in New England except in the extreme north, golden-seal can be raised successfully by anyone willing to give as much attention to the needs of the plant as is now done by everyone who would raise apples successfully. What is necessary is to imitate as nearly as possible the conditions under which the plant thrives when growing wild. The government bulletin entitled "The Cultivation and Handling of Golden-Seal" says in this connection:

"The soil conditions should imitate as closely as possible those seen in thrifty deciduous forests. The soil should contain an ample supply of humus, well worked into the ground, to secure the lightness and moisture-retaining properties of forest soils. The best form of humus is probably leaf mold, but good results may be obtained by mulching in the autumn or early winter with leaves, straw, well-rotted stable manure or similar materials. After the soil has been prepared and planted, it is well to add a mulch in the fall as a partial protection to the roots during the winter, and the decay of this material adds to the value of the soil by the time the plants appear in the spring. The forest conditions are thus imitated by the annual addition of vegetable matter to the soil, which, by its gradual decay, accumulates an increasing depth of soil rich in the materials adapted to the feeding of the plants and to the preservation of proper physical conditions. If sufficient attention is given to the presence of this mulch, the nature of the underlying soil is of less importance than otherwise. In the case of clay, the incorporation of a large amount of vegetable matter tends to give lightness to the otherwise heavy soil, facilitating aeration and drainage. Since the roots of golden-seal do not grow well in a wet soil, thorough drainage is necessary. A lighter, sandy soil is improved by the addition of humus, since its capacity to hold moisture is increased thereby and the degree of fertility is improved."

### Method of Planting

The next thing to be considered is the method of shading the plants, and this is a matter of importance, especially as it involves the greater portion of the expense of cultivating the plant. The directions given by different authorities vary considerably, but I will give those of Hoag, which seem to me simpler and easier to carry out than those of the Bureau of Plant Industry. I quote:

"Almost any form of artificial shading that will keep at least half of the rays of the sun from the plants and at the same time allow the water to fall through evenly will answer. For small beds a covering of brush or strips of board supported by a frame work over the beds will do. For larger gardens, designed for growing the plant on a commercial scale, the following form of shading is recommended and will prove satisfactory:

"Take posts 8 1-2 feet in length and set them in the ground 2 feet in depth, placing them 12 feet apart each way. This will leave them 6 1-2 feet above the ground. Place 2×4 timbers one way across the tops of the posts. These timbers should set up edgeways. Now, running the other way, place 1×3 inch cross-strips, also set up edgeways, the ends resting on the main timbers. Every 4 feet there should be 2 of these strips, 2 1-2 feet apart. These are to support panels of lath 4 feet square. These panels are made by nailing common 4-foot laths to 3 cross-pieces, laths being used for the cross-pieces. If the laths are 1 1-2 inches in width, they should be placed from 1 1-2 to 2 1-2 inches apart. These panels laid over the framework about May 1 will afford ample shade during the summer. In September they should be removed. If left on during the winter, they will be broken down by the weight of the snow.

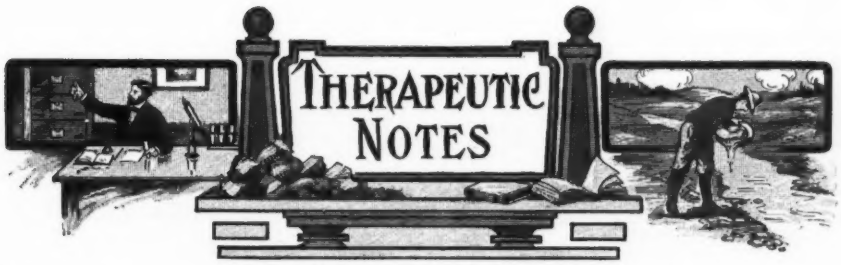
"The rows of posts should run in such a direction that the laths will extend crosswise of the slope of the land, if there be any slope to it. This will allow of the water dripping

evenly from the edge of each lath, instead of running to one end and then dripping in a puddle. This method of shading is simple, efficient, and at the same time comparatively inexpensive. It will be sure to give satisfaction."

The initial expense of shading a field is the principal part of the expense of cultivating the plant. Hoag estimates that the entire cost of erecting the necessary shading should not much exceed $600 an acre. The Government pamphlet estimates the cost, in the vicinity of Washington, at from $700 to $800 per acre. Of course it would vary in different places, according to the cost of lumber.

The yield of dried root at the end of the third year is estimated conservatively by the Bureau of Plant Industry at 1500 pounds per acre. Hoag makes the more optimistic estimate of 3600 pounds. He also estimates the cost of shading and cultivating at $1800. If either of these estimates is anywhere near the truth, an acre of golden-seal is better than a gold mine, and the culture of hydrastis canadensis ought to bring a competence to a large number of people, of whom a good proportion should be members of the medical profession. For 1500 pounds at $5.50, the present price per pound amounts to $8,250—and the price is still soaring.

I WAS talking recently with a director of one of the largest—I think the largest—institutions in the world engaged in the problem of advancing human knowledge. I was asking him particularly as to what steps were taken by his organization to bring that knowledge to bear upon human life in such a way that the truth would become embodied in the tissue of social consciousness. He replied that that was not the function of that institution. I asked specifically, picking up a certain book, a study conducted at great expense, a splendid piece of work, which purported to show, and I believe did show, how water transportation could be efficiently carried on. I said, "How many copies have been sold?" and he said, "Seven copies." This book which contained information which might affect favorably the lessening of human labor in the great transportation lines of the world, at present largely exists as black marks on white paper filed away on library shelves. This knowledge, to which the world has a right, somehow has not been put into the world's digestive system; it is stowed away. It seemed to me a tragedy.—Dr. Luther H. Gulick.




### TURPENTINE USEFUL IN HEMOPTYSIS

In discussing the treatment of hemorrhage, in the January number of *Merck's Archives*, Bram says that oil of turpentine is surprisingly prompt in its action in controlling pulmonary hemorrhages. It is administered in 5-minim doses every two hours.

### RELIEVING A PAIN DUE TO A BURN

We are informed that Dr. G. H. Dando, of Montpelier, Indiana, was called upon recently to treat a man working in an oil-well pumping station. His clothing, which was saturated with oil, took fire and the man was terribly burned from the waist up. The doctor had to drive four miles to see this patient and had plenty of time to think over the method of treatment. He finally decided to use quinine and urea hydrochloride. Upon arriving at the bedside, he dissolved twenty one-grain tablets of this substance in a cup of water, and applied the solution to the burned surface. In a few moments the patient was fairly comfortable, and made no complaint during the next forty-eight hours.

### IS CHROMIUM SULPHATE LAXATIVE?

Dr. Frank B. Kirby, of East Orange, N. J., commenting upon Dr. Burnett's inquiry, in a recent number of THE CLINIC, as to the laxative action of chromium sulphate, informs us that he has seen dozens of physicians who are using this drug, but has never found one reporting a laxative action. On the contrary, it seems more likely to produce constipation than diarrhea. Dr. Fulton, of the Fulton Sanitarium, Philadelphia, Pennsylvania, occasionally reports hyperacidity (heartburn) and constipation accompanying its use. Other physicians are in the habit of using an antacid before giving chromium sulphate.

The experience reported by Dr. Kirby accords with that received direct from a number of readers of CLINICAL MEDICINE since the appearance of Dr. Burnett's inquiry. Apparently no one besides the doctor has observed a laxative action from this drug.

### THE TREATMENT OF SURGICAL TUBERCULOSIS WITH TUBERCULIN

In the *Deutsche Zeitschrift für Chirurgie*, 1912, page 243, J. Bungart reports his results in a series of cases of surgical tuberculosis, which had been treated with moderate and slowly increasing doses of tuberculin. After having observed and controlled the results very carefully in each individual case the author concludes that tuberculin is a harmless remedy in the hands of the careful and properly trained physician.

While some of his cases might probably have shown the same improvement without the tuberculin, others had progressed for long periods without improvement, which began clearly, after the administration of the specific remedy, in a decided amelioration of the general condition, as well as of the nutrition and strength of the patients. In some cases the fever yielded promptly to the injections. Unfortunately, the surgical condition was not, as a rule, affected materially, and the tuberculin treatment cannot replace the surgical intervention which had been practised hitherto. Its chief

indication is found in those cases in which conservative methods are required, because operation is, for some reason, impossible.

### INFLUENCE OF CALCIUM CHLORIDE ON THE HEMORRHAGIC TENDENCY

The favorable effect of calcium chloride in correcting tendencies to hemorrhage by increasing the coagulability of the blood has recently been questioned and even denied by several authors, on the ground of negative experimental results. It is therefore of interest to note that Parisot and Heully recently showed, in a report to the Paris (France) Society of Biology, that the hemolysis due to the administration of narcotics was prevented by a preliminary treatment of the patients with 60 grains daily of calcium chloride. It appears, therefore, that a tendency to postoperative oozing may be prevented by calcium treatment. In regard to its effect in other forms of bleeding further experiments are required.

### IODINE AS A SKIN DISINFECTANT

The use of iodine as a means of disinfecting the skin previous to operation has become very general and, its efficiency having been attested by many investigators, this exceedingly simple means of preparing the site of operation has been received eagerly and gratefully.

Unfortunately it appears that even this method, simple as it is, is not without danger, owing to some individual susceptibility to the action of iodine that may be met with. Broê, a French military physician (see *Medical Review of Reviews*, 1911, July), reports a case of fatal iodine poisoning of a man after receiving two coatings of the tincture. The patient was prepared for an operation for inguinal hernia, which was successful. The day after operation the right chest was painted with tincture of iodine, on account of the pain of which the patient complained. This application was followed by fever, erythematous eruption, cramps, diarrhea, and cardiac weakness, ending in death, due to rapidly progressing iodine poisoning.

The author suggests that the official tincture be diluted with alcohol before using it on the skin, but the reviewer of *The Medical Review of Reviews* fears that this dilution may impair its efficacy. In his surgical work, he always washes off the excessive iodine with alcohol after the completion of the operation.

We know of just such cases of iodine poisoning occurring right here in Chicago, though no deaths traceable to it have been brought to our attention. Even iodine should be used with discrimination.

### THE TREATMENT OF CARDIAC ASTHMA WITH HEROIN

A. Fraenkel (*Therapeut. Monatsh.*, 1912, p. 14) discusses the disadvantages of treating cardiac dyspnea with subcutaneous doses of morphine, mentioning especially the danger of producing addiction. This disadvantage is also peculiar to pantopon, the opium preparation recently proposed by Sahli. On the other hand, Fraenkel has used heroin, in doses of 1-12 to 1-6 grain, subcutaneously, with excellent results. He believes that a drug habit is not so easily established by this alkaloid. He also used to advantage a combination of morphine hydrochloride, 1-3 grain, heroin hydrochloride, 1-6 grain, and distilled water, 2 1-2 drams, of which the dose for each injection is 7 minims.

All of which suggests a recent newspaper article, in which it was stated that a "heroin habit" was developing in the underworld, replacing cocaine addiction. Have readers of CLINICAL MEDICINE seen cases of this kind?

### CARE OF RUBBER GLOVES

A manufacturer of rubber gloves gives, in *The Medical Brief* (Jan., 1912), the following directions regarding the care which gloves should receive:

Never leave grease or oil on gloves. Keep the gloves dry and liberally dusted with some moisture-absorbing powder, such as French chalk, starch or lycopodium. Keep the gloves at full length or rolled up, never folded, or keep the gloves entirely

submerged in water or a weak antiseptic solution and away from direct sunlight.

Probably the best method of putting on is for the nurse to grasp the inside of the glove (gauntlet turned back) with both hands, holding the palm surface of the glove down and fingers inward, while the surgeon, with hands under water, introduces his hand.

Never try to remove gloves by pulling at the fingers. Grasp the top of the gauntlet and pull the glove inside out. Submerging the gloved hand in water or pouring water into the gauntlet will cause the glove to slip off easily.

### GIVING CASTOR OIL

"A castor oil 'fiend' has never, to my knowledge, been made the subject of a medical report." So says Dr. Solomon Solis Cohen in *The New York Medical Journal*. This remedy, while capable of doing harm, is an effective laxative, and usually harmless. The difficulty is its taste, and this may be disguised by saccharin and peppermint or cinnamon, or it may be taken at the soda-fountain with lavender or vanilla syrup. A good combination is one of equal quantities of castor oil and spiced syrup of rhubarb. "It imparts so good a taste to the mixture," says Cohen, "that among many of my very young friends it goes by the name of the 'candy medicine.' Their mothers give it to them as a reward for good behavior."

### THE TREATMENT OF PLEURAL EXUDATES

Drs. Karl and Silvio von Ruck, in their report from the Winyah Sanatorium, Asheville, N. C., for 1911, advocate the use of tincture of green soap in the cases of pleurisy with effusion in which the latter is not absorbed promptly. This treatment has proven valuable in many instances, not only when the exudate was serous or serofibrinous and of recent date, but also in all cases of fibroelastic exudates and pleural thickening.

The green soap is applied by friction over the affected side after the skin has been washed with ordinary soap and water. As a rule the application is made at bedtime, is allowed to remain over night, and is repeated daily, or less frequently, depending upon the tolerance of the skin. When hyperemia occurs as an effect of irritation this is allowed to subside before the application is repeated. In many cases the skin is tolerant enough to permit daily applications; in others marked hyperemia follows after its first use, in which event the soap must be diluted.

### TO ILLUMINATE THE THROAT

Every doctor has experienced the difficulty of peering into a child's throat by the flickering light of a gas light or with the faint illumination of a kerosene lamp or a tallow candle. Get one of the pocket electric "search-lights," which can be bought from any department store, mail-order house or dealer in electric novelties. It can be carried in the satchel or pocket, is ready for any emergency, from the repair of Dobbin's harness to the inspection of a hemorrhoid, and furnishes an excellent light. The price is generally in the neighborhood of a dollar. The little dry-cell which it carries is soon exhausted, but this can be replaced at from twenty to thirty cents.

### THE TREATMENT OF POSTDIPHTHERITIC PARALYSIS WITH SERUM

In the *Münchener Medizinische Wochenschrift* for 1912, page 84, Max Crohn reports some cases in which he had observed extensive paralysis following attacks of diphtheria. Three boys, four to twelve years old, had been treated, during the acute stage of the disease, with doses of antidiphtheritic serum amounting to 1500 to 2000 units. After the development of the complication, the author repeated the serum, in doses of 1000 to 2000 units, and obtained prompt arrest of the neuritic processes, and remarkably rapid improvement followed.

This observation is a very interesting one for the practitioner, since it is undoubtedly true that since the introduction of

antidiphtheritic serum the frequency of paralysis has increased. We do not have to decide whether this increase is due to the more frequent use of the serum (which we doubt) or to the better recognition of diphtheritic conditions. The important fact is that *these paralyses appear to be amenable to repeated doses of the same serum.* The assumption is that the diphtheria toxin causes the paralysis, which can best be combatted by the serum. Moral: give larger initial doses of diphtheria antitoxin.

### AN ITALIAN OPINION ON CACTUS

Prof. La Franca of the Institute for Demonstrative Pathology in Naples, Italy, concludes, from the results of his experimental and clinical use of cactus grandiflorus, that the drug acts upon the contractility of the heart and that the administration of this remedy produces an increase in the systolic force and therefore a greater width of the arterial wave. In all patients in whom he employed it he obtained exactly the same results.

### EFFECT OF ATROPINE ON PREGNANCY

Dr. G. Mueller (noted in *Wien. Med. Woch.*, 1911, No. 47, 3026) reports the case of a woman 25 years old, who, in her third pregnancy, took an overdose of belladonna. At the end of the seventh month this woman drank a tea containing leaves, stems, and berries of atropa belladonna, and she became ill, there being vomiting, disturbances of vision, and hallucinations. After recovery the fetal movements became feeble and finally ceased. At term a dead child was born, the placenta showing signs of protracted retention, containing numerous lime incrustations and showing obliteration of all branches of the choroidal vessels.

### THE TREATMENT OF HEMOPTYSIS

In the treatment of pulmonary hemorrhage the Drs. Karl and Silvio von Ruck (report from the Winyah Sanatorium, Asheville, N. C., 1911) believe it of material advantage to control the blood pressure at frequent intervals by means of the manometer, keeping it constantly about ten millimeters Hg below normal for ten days to two weeks after the hemorrhage. For this purpose small doses of tincture of veratrum viride [better, veratrine.—ED.] appear to be most suitable, but proper physical and mental rest in bed, laxatives to produce daily evacuations, relief of irritating cough, and a nonstimulating diet they consider of still greater importance. The rest should be continuous and two weeks should be the minimum before the patient is allowed to be up or to make any physical exertion, especially after moderate or severe hemorrhage.

### THE QUININE ENEMA IN PNEUMONIA

In a previous issue of CLINICAL MEDICINE we referred to the good results obtained by Dr. R. L. Hammond by fanning pneumonia patients. The doctor's article was published in *The Medical Brief* last September. In a recent letter he suggests that we call special attention to a formula referred to in that article, which he uses in the tympanites sometimes complicating pneumonia. This enema consists of: quinine sulphate, grs. 10; glycerin, dr. 1; and hot water, ozs. 8. This enema is injected night and morning. Half a dose may be given to a child from six to twelve years of age.

### MIGRAINE

According to Schottin (*Wien. Med. Woch.*, 1911, No. 38, 2496), migraine depends upon an abnormal irritability of the psychosensory and psychosensitive cortical centers, a condition which, in his opinion, is analogous to the spasmophiliac diathesis of rickety children. Hence we have here to do with an autointoxication of the organism. The author has found that in younger persons phosphorus has a good effect in migraine, but not so in older ones. He prescribes, for adults, a combination of lecithin and phosphorus in an oily medium. As this treatment was successful in the majority of cases, the author considers that migraine is due to a deficiency of phosphorus.


# Certain Advantages of Dosimetric Practice

EXPERIENCE convinces me more and more that dosimetry offers nothing but advantages. I repeat what I have said before, when speaking of the strychnine granules, that dosimetry permits the employment of the most active medicaments with full protection against danger from over-dosage. The companies which insure against suit for malpractice would have no clients among internists were all physicians dosimetrists. If any reader recalls what I have already said about the dangers of cocaine he will find that there is no danger [of acute poisoning] from it when the drug is administered dosimetrically. Moreover, there are but few medicaments (if indeed there are any) that are harmless in themselves; yet they only become harmful when ill dosed or when given in inappropriate cases. Some medicaments, which are reputed harmless, may in certain cases have a fatal effect. Let me give an example:

Certain peasants drink frequently an infusion of the leaves of the periwinkle plant. In the winter they make use of the dried leaves and in summer they use the green. They use the infusion themselves and in their families and recommend it to their friends and acquaintances. Some attribute to the periwinkle infusion the virtue of a refreshing laxative. "It makes you sweat," says one; "It dries up the milk," say others. The effects produced vary with the doses.

What is the periwinkle? There are two kinds of this plant, the small one, called also "vinca minor," "little witch," "sorcerers' violet," "shepherd," "little maiden"; and there is the big periwinkle, "vinca major."

The small periwinkle is most used. The leaves of the large periwinkle (which is also used) are recognizable by their much larger size, and also by the fringe of hair which borders their edges. The small periwinkle, vinca minor, is a small perennial herb of our (French) region, belonging to the family of Apocynaceae, class of Plumieria.

I shall not describe the periwinkle more than to say that its leaves preserve their entire shape in the dried state, as do also those of the coca, jaborandi, cherry, laurel, and so forth. Their small size distinguishes them from other leaves which have the same property. The median rib of the periwinkle leaf is the only salient one, while the others are hardly visible. The plant is not odoriferous and its taste is slightly bitter. The leaves contain a bitter principle readily soluble in water, and tannin in great abundance, so that it has been thought good enough to tan skins. The leaves of the periwinkle are slightly astringent in small doses, but in large doses they become purgative and diaphoretic. They are at present not used except for drying up the milk secretion. In former times the leaves were employed against hemoptysis and paludic fevers.

Here, then, we have a plant, the periwinkle, which seems to be quite harmless. Yet I am convinced, nevertheless, that its action was fatal in a very recent case. It was that of an albuminuric patient who suffered for a long time from a very painful neuralgia, which made him almost help-

less. On the advice of a neighbor he took the infusion of periwinkle regularly every day, and for four days in succession this albuminuric took an unknown quantity between meals. On the 12th, 13th, 14th and 15th of September he took the infusion of the green leaves at his meals and between them. On the 16th he had the first convulsive crisis of uremia, of which he had about twenty before the night of September 19, when he died. The death took place in spite of the best care and the best medical attendance of the vicinity.

Can we see in this case nothing more than a mere simple coincidence between these uremic crises and the potions of periwinkle infusion? For many minds this coincidence will have existed in this case, but for my mind it never had such an existence. Here was an already diseased kidney, and it became locked up by this "little witch," as it ought to be—but in another way. The periwinkle plant contains tannin, beside many other substances not yet ascertained, and this tannin might be incriminated. Many other plants which contain tannin would undoubtedly have worked the same mischief if they were given in the same quantities as were given here.

In dosimetric practice a similar case could not happen. In this practice medicaments are rigorously dosed and are used for one determined purpose only. One alkaloid, well dosed, is of more value in most cases than an extract of an entire plant, and especially than an infusion of the same plant, where, in association with the one desired alkaloid, there may be other undefined alkaloids and substances which may destroy the desired good effect.

Another great advantage of dosimetry, of which much is spoken, is that in it we do not have to reckon with a maximal dose of the medicament employed. The dose in each dosimetric granule is a *dosis minima*, with the multiple of which, any-sized dose can be obtained.

The watched-over patient can not be poisoned, because of the symptoms which precede intoxication, such as nausea, vomiting, dryness of the throat, prickling of the tongue, which announce that the organism is saturated with the medicament, and that its elimination is not made sufficiently.

Another advantage of dosimetry, which I find appreciable, lies in suggestion. Dosimetry, when well managed, inspires confidence. The dosimetric granules in part owe their success with the patient and with his friends to the manner in which they are introduced—which has its due influence. Here are little pilules, granules, given in precisely measured intervals; each pilule treasures up and dispenses a volume of energy which can not but have a very great and surprising influence, in striking the patient's imagination.

To sum up, we say that dosimetry is a therapeutic method which has well stood its test. It is certain, active and protective against all danger. It renders service to both physician and patient, because the alkaloids are rigorously dosed in granule form.—Dr. Pigeaud in *la Dosimetrie*, January, 1912.

## THE BACTERIA IN DISTILLED WATER

Prof. Paul Th. Mueller examined sixteen specimens of distilled water taken from as many drugstores in Gratz, Austria. The following is an excerpt from his report:

It is well known and proven that certain unpleasant side-phenomena (which occur very often in cases of intravenous injections with salvarsan) are developed from the bacterial content of the distilled water used in preparing the solution. (See also *Pharm. Zentralh.*, p. 1036, No. 52, 1911).

The author used a process which enabled him to ascertain the number of germs contained in the water, through a microscopic count. This process rests upon the precipitation of bacteria in 100 cubic centimeters with liquor ferri oxychlorati. The bacteria are then stained with a concentrated alcoholic solution of gentian violet, centrifuged with the iron precipitate and placed on the microscopic slide. There the number of bacteria is ascertained by taking the average of several counts in a field of vision of a microscope fixed for that purpose; multiplying this average with 100 will give you the number of germs found in one cubic centimeter of the water in

question. This procedure enables the investigator to ascertain not only the living [Better say "the entire."—GLEANER.] bacteria but also parts of those destroyed, if they are not reduced to undiscernibleness.

From the published tabulation we see that the number of germs in one cubic centimeter of the distilled water examined runs between 68,000 and 700,000. In one case it came up to 1,150,000, and in another case as high as 6,050,000.—*Muench. Med. Woch.*, 1911, 2739, in *Pharm. Zentralh.*

## INTESTINAL PERISTALSIS

Various organic extracts determine intestinal peristalsis on intravenous injection; such are particularly duodenal extracts, and liver or spleen extracts. It has not been shown that this property, which has been therapeutically utilized, can be referred to a true hormone, i. e., a product which plays a physiologic part by way of the internal secretions.—*Paris Medical*, 1912, p. 35.

## POISONING WITH METHYL ALCOHOL

Recent reports show the harm done by methyl alcohol in industrial pursuits. It is used in the polishing of various substances, but more especially in cabinet making or furniture work. It is used also in hat making and in the dyeing industry. In these industries we notice cutaneous eruptions and, when vapors of methyl alcohol are in the air of the workshops, nausea, headaches, ringing in the ears, scratching in the throat, tremors, giddiness, at times severe vomiting and great digestive difficulty and convulsive cramps of the fingers. Eye troubles have also been observed quite often, varying all the way from slight swelling of the conjunctiva to strongly irritated conditions with redness and suppuration. Most serious are the diseases of the optic nerves, under such conditions, which may lead to total blindness. Reports of this kind we do not hear of in Germany, but they are frequent in Hungary, Russia and America.

From the latter country we have it reported that two workingmen who were engaged in coating the inside of beer vats with a solution of shellac in methyl alcohol, 50 percent, which they heated for quicker drying, inhaled the vapors and became blind in a short time. The same accident happened to a painter, who for some months used Columbian spirit with 95 percent of methyl alcohol, instead of oil of turpentine.

Von Gross of Budapest reported last year, at the convention of ophthalmologists, ten patients in Hungary whom he had treated for atrophy of the optic nerve, due to methyl-alcohol poisoning. He added that seventy fatal cases were recorded in Hungary, in which death resulted from drinking methyl alcohol.

In the year 1909 Dr. Alexander Natanson, of Moscow, reported a minutely observed case of blindness which was preceded by strong digestive disturbances, in which case the patient drank "kinderbalsam" (infant balsam). Sinkowitsch observed five patients who had drunk "kinderbalsam," and he added that in the paint and drugstores of Kasan a "kinderbalsam" is offered for sale, which is of suspicious appearance and bad odor, after drinking which four persons died.

Buller and Casey Wood have compiled records of 280 cases from the United States of poisoning (blindness and death) after drinking Columbian spirit, whisky, punch, bay rum, Jamaica ginger, and lemon essence, all of which contained methyl alcohol.

Rudolph Foerster writes about the effects of methyl alcohol as follows: Methyl alcohol or wood spirit is often added to American marmalades, used as a bitter flavor in spirits, as an addition to varnishes, and in bay rum and essence of peppermint. Of the noted cases of poisoning with this substance thirty-five cases in Russia attracted most attention. The patients were all in attendance at a wedding party, and all drank "polishing" spirits [shellac?—ED.] and became sick. Eleven died.

Death occurs with the symptoms of weakness, and with colic and cramps. In a Russian village twenty persons died in two days from the use of methyl alcohol. The vapors of this substance are enough

to affect one badly. In a great number of cases this vapor affected the vision, varying in degree from nebulousness to total blindness.

Eighty-nine cases are known of total blindness after drinking of this spirit and eighty-two cases of death without previously becoming blind. Remarkable is the fact that different individuals are differently affected by this poison. In some, death occurs after the ingestion of but small quantities, while others can ingest a comparatively large quantity without any harm.—*Pharmazeutische Zentralhalle*, 1912, 46-47.

### GANGRENE OF THE LUNGS

Two such cases were unexpectedly cured in a relatively short time by oil of gomenol or oil containing iodoform and guaiacol. A few injections of the active substance were sufficient to make the fetid expectoration disappear, lower the temperature and cure the patients.—*Paris Medical*, 1912, p. 35.

### SUBCUTANEOUS INJECTION OF OXYGEN FOR CHRONIC RHEUMATISM

Dr. Aurelio Mazzuoli, the assistant of Prof. Bernabei of the University of Siena, Italy, who is the advocate of the remedy mentioned above, recently gave a demonstration of this treatment. A patient, aged 65 years, was almost incapable of moving on account of chronic rheumatism and its accompanying deformities and pains. He submitted to subcutaneous injection of oxygen for two days and received thirty treatments of between 200 and 500 cubic centimeters of gas each injection, given in the vicinity of the joints and never twice consecutively in the same region.

The pains became lighter and disappeared very soon after the first injections. The contractions had yielded in great part, and movements, great and small, became again possible. The patient took up walking again, and he can now use his still deformed fingers, especially in dressing and buttoning his clothing. His general condition is excellent, and he has used his returned appetite to good effect in increasing his weight from 77 to 103 pounds. The urine increased in solid matter, and the blood is richer in hemoglobin.—*Paris Medical*, 1912, p. 75.

It would be interesting to learn what technic was employed in making these oxygen injections. The idea is a rational one.

### OXALEMIA IN CERTAIN CONDITIONS

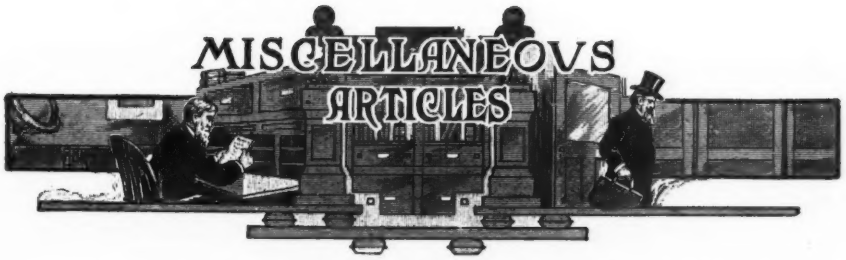
Loeper and Bechamp have verified the observation that oxalemia is found especially in patients affected with gout, diabetes, intestinal and renal lithiasis, rheumatism, and neuralgias of undefined character. The excess of oxalic acid is eliminated by the urine, the intestine, the stomach, and in the respiratory passages. A part of it is deposited in the tissues, especially in the nerves. Another part is destroyed by being transformed into carbonic and cabonous oxides.—*Paris Médical*, August 5, 1911.

### DIAGNOSIS OF APPENDICITIS

Blumberg (*Berl. Med. Ges.*, Oct. 27, 1909, through *Wien. Med. Woch.* 1910, No. 17) describes a new symptom of appendicitis and peritonitis, consisting in a severe pain which is produced by the sudden removal of the hand that has been pressing upon the abdomen, if the peritoneum is affected. On the sudden removal of the hand the elastic peritoneum is suddenly returned to its position. If it is normal, no pain occurs, if it is inflamed, intense pain follows. This method renders an early diagnosis possible, but it does not enable us to make a differential diagnosis between appendicitis and disease of the uterine appendages.

### INTERPRETATION OF DIABETIC MANIFESTATIONS

Quelpa again insists on his disintoxication cure of diabetes by prolonged fasting and repeated purgation, which should be applied systematically, in all strictness, in order to obtain its never-failing efficacy. —*Paris Medical*, 1912, p. 36.




# Consistency in the Rational Treatment of Acute Gonorrheal Urethritis

THIS article is not an answer to the one by Dr. William J. Robinson, of New York, in the March issue of this journal, for in my opinion that article does not deserve any answer. This is a statement for the readers of THE AMERICAN JOURNAL OF CLINICAL MEDICINE who, I know, appreciate real criticism rather than abuse.

In the opening statement of that article Dr. Robinson tries to impress upon the reader how painful his task is, and his statement that "I have none but the kindliest personal feelings toward him" surely demonstrates (from what follows) how consistent all of his statements are.

It is very evident to anyone that Dr. Robinson has read my article with a prejudiced mind, and that he did not take the time to analyze the statements made. He is like other critics, in that many quoted statements are garbled, and he has taken only the parts which suit him best, without reading what is before or what follows. As a result, he has written something which is not the reasoning of a dispassionate and disinterested individual. It is impossible to refute any statements to anyone who says that you are not telling the truth or that you are not informed.

Surely, the "critic" knows that in undertaking to write my article I could have copied the recent textbooks. Such articles appear in a great many journals as strictly original. We should not need THE AMERICAN JOURNAL OF CLINICAL MEDICINE if we wrote such articles. The reason why this journal is so popular is because it contains a great many articles which are really original and true to scientific reasoning, containing the honest convictions of the authors.

I fear that if I should say something about every one of Dr. Robinson's socalled criticisms, this article would be entirely too long, but I could not refrain from writing in this way, and I assure the readers that it does not pain me in the least to write as I do.

Now, take up the criticisms. Let me repeat: If we have a patient under our control we shall never have a single complication, barring accidents—that is, traumatism—if we do not use any local treatment.

As an evidence of the truth of this statement, if the "critic" *wishes* to be convinced, I have records, not merely of fifty or a hundred cases, but of *more than one thousand cases*, of patients whom I have treated (very many of whom were from the ignorant and careless class seen at public clinics) who did not have a single complication; and I also wish to impress upon his mind that copaiba is not the only thing responsible for this result. It is due besides to the hygiene and the diet, and other factors, as he will see if he will reread my article.

As regards druggists and drug clerks treating patients without local treatment, I do not know of a single one. In fact they are the individuals who give injections most promiscuously. They may give copaiba with them.

Concerning quacks, I wish to say, the "critic" to the contrary notwithstanding,

that these men are the best-informed and most up-to-date people, *when it comes to fads*, in the treatment of any disease, and if the doctor will really take the pains to investigate, without a prejudiced mind, he will be convinced that such is the fact.

I do not treat any disease by socalled "modern" methods if these do not appeal to my reason, as based upon fundamental scientific principles; and I here make the statement again, that we "have not advanced one iota in the treatment of gonorrhea within the last thirty years," as regards actual results.

I have not made the statement that "every patient will recover on bread and water." That the mucous membrane, as well as any other tissue, is capable, under favorable conditions, unaided, of limiting and finally destroying infection is a well-known fact. Why, if such were not the case, then the many persons who suffer from rhinitis, gastritis, conjunctivitis, and so on, and who recover without treatment, are merely afflicted with some form of psychosis presenting symptoms analogous to these diseases.

Surely, Dr. Robinson has heard of phagocytosis and other defensive processes which occur within every human body when it is attacked by foreign organisms; surely all such cases do not require local interference—on the contrary, they are often harmed by it. We all know that peritonitis very often follows curettage for gonorrheal endometritis, whereas, if the local trouble had been left alone, the general infection might not have followed. Surely this is "rational." In this age prophylaxis is the thing, and in my article I lay more stress on the prevention of complications than on the treatment of the disease *per se*, even though drugs may not play such an important part in it.

Some of the statements in the fifth paragraph of Dr. Robinson's article are so ridiculous that language fails me.

For instance: That the gonococcus, as well as every other germ, generates a toxin everybody knows. In fact, every living being generates a toxin that is not only poisonous to other organs, but poisonous to itself, and for that reason the gonococcus- as well as pus-infections are purely local as long as we do not allow them to become general, through absorption.

I repeat, I have yet to see the first patient develop complications who has been treated by the dietetic and hygienic methods outlined in my article, except those due to traumatism.

The "critic" even goes so far as to discuss the *possibilities* referred to in my article. I have not given these any emphasis—they were merely incidental to the argument, not a part of it. However, he quotes me correctly, that "theoretically it *might* be possible to prevent gonorrhea by the constant internal use of urinary antiseptics." To criticize this statement clearly shows how excessively hypercritical the critic is.

But, I will ask, why should this not be possible? If the urine is antiseptic, will the gonococcus or any other germ thrive in it? True, hexamethylamine has no effect on the gonococcus, that is, it will not kill it, but it will prevent its multiplication, and in preventing its multiplication it may be possible to prevent a gonorrheal infection. Further, any agents we may use, capable of killing the gonococcus or any other germ, will also destroy the tissue upon which that germ grows. In the treatment of infections *we do not aim to kill the germ in the tissues, but we rather aim to assist nature* (phagocytosis) *in limiting the spread* of the infection (as I explain in my article) and to *increase* the resistance to the bacterial invasion; thus the germs are destroyed, not only by the phagocytosis, but also by their own toxins. Frequently an antitoxin is formed which actually destroys the germ or its poisonous product.

As regards the position of the penis, I will ask the critic if he has ever tried to urinate with the penis bent down between the legs when there was an erection. While the word "drainage" was perhaps an infelicitous one, I think my reasons for recommending this position are reasonably clear. The dangers from chordee are minimized; the passive congestion is relieved; blood-depletion (and hence nutrition) is more complete; and the parts are more easily kept clean.

If the critic really meant to criticize, he might have found out, first, whether there were any typographical errors, which there certainly were, for the reason that the editor of this journal was so busy getting out the January number that a proof was not submitted to me for correction, which accounts for the quantities in the prescription given.

I did not write a textbook. I have merely written the way I treat such patients; but I certainly am amused when the critic, mind you, says, "I am myself against too frequent or too strong or careless injections." I should be very happy to know what that means. Of course, the only one who knows whether they are too frequent, too strong, or careless is the critic.

I will say here, that I was taught to use injections, and the reason I have given them up, except for chronic gonorrhea, is because I was not satisfied with the results I have obtained; and neither is anyone satisfied with local treatment who takes the pains to follow carefully his patients and estimate results. "Some of the worst, hard, unyielding, impassable strictures are to be found in men who never had an injection." That is quite true, but only in cases due to traumatism, or to ulceration due to gonorrhea or other infections of frequent and neglected attacks in men who are careless.

Now about injections, even though the formula is full of typographical errors, as printed, nevertheless my critic seeks to give the readers the impression that all of those drugs are absorbed. However, I appreciate "the benefit of the doubt" which my critic so kindly and graciously gives me. In the next paragraph he tells you that an ordinary 50-Cc. syringeful of fluid will pass into the bladder without one's having to use *any* or *hardly* any force.

I am not seeking to inform my critic at all, but in closing I will say that I should have appreciated real criticism; that abuse and insult is no criticism; that no one knows it all; and that every statement that I have made I can and am ready to substantiate. The only part that I cannot understand is where my critic got the information that I am a genitourinary specialist. I have never claimed to be one.

And right here, a word about specialists, in general. It is unfortunate that after years of specializing the average specialist ceases to know that the given part of the anatomy which he treats is really a part of the whole human body. Very many of them become mercenary. They do not come in intimate contact with the patients they are treating, and their practice, therefore, is more or less transient. If a good result does not follow, as is usual in gonorrhea as treated by a specialist, they go back to the family physician for advice; for the family physician really takes an interest in his patient, not merely as a patient, but as a fellow human being while the specialist, as a rule, however honest and sincere he may be, has not the opportunity to follow his cases up, and therefore each one has a method of his own.

Some fad springs up every few years, and the number of local treatments advised at such frequent intervals by specialists in this disease demonstrates conclusively that none of them is infallible.

If I could possibly find any better treatment for gonorrhea than I have outlined in my article, I should certainly be pleased to use it on my patients. And right here I can say that this is not the first time that this article has appeared in print. I have read it several times before various medical organizations. I have heard all sorts of criticism, but never have I been so grossly abused as I have by Dr. Robinson.

BENJAMIN H. BREAKSTONE.

Chicago, Ill.

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[Just a word from the editor: The reason why Dr. Breakstone failed to receive a proof is because his copy was placed in our hands so late. We did not receive the manuscript until *a full week* after our regular closing date, at which time all other material was on hand and most of it set up. We held the forms, but we could not delay for proofs. There was one error, of which we are conscious, in the formula, but the quantity of atropine given in the journal was according to "copy". However, we apologize—and we are glad to do so for the cause of peace. We like discussions, occasionally we enjoy a fight, but we do

hate to have our friends—our really best friends—scrap among themselves. So we hope this is the conclusion of the whole matter. Let us "return to our muttons."—ED.]

## A HOME FOR THE RETIRED DOCTOR, HOW CAN WE GET IT?

In our February issue, under the title, "A Sanitarium for Physicians—Why Not?" we discussed, editorially, the possibility of establishing a home or a series of homes for old and disabled doctors. That the need for such an institution is realized was shown by the large number of letters, commenting favorably upon the suggestion, which we have received. As showing the sentiment of the profession, we print herewith just a few of the comments:

### A SANITARIUM FOR PHYSICIANS

Your article in the February number of CLINICAL MEDICINE on the sanitarium for physicians has attracted my attention. I wish to endorse all you have said. It is high time that a place or places should be established for invalid physicians or their dependents. It is only through agitation on the part of the press that we may hope to secure such a place. So keep on writing.

E. E. FISHER.

Salem, Ore.

### THAT DOCTORS' HOME

I have for years wondered why our profession has not provided homes for the old and worn-out physicians who have failed to accumulate enough to provide for their days of extremity. I am heartily in the movement which you have inaugurated. How many times have I heard people speak of some old doctor who has died penniless—often a man who was considered a great doctor in his day, yet left without money, largely because he was overkind to the poor, and careless in business matters.

I hope that I shall never be so unfortunate, yet all hope this. Any of us may fall victims to ill health, loss of property or other misfortunes. I fancy we should all feel more secure if we knew there was a home provided for us, where we could mingle with our brothers in case trouble should come to us.

May God move upon the medical profession and incline their hearts, minds and pocketbooks to take up this enterprise in earnest. I am ready to do *my* best. Let us keep the ball rolling, until it gathers enough about it to insure the erection of these homes.

MALCOLM DILLS.

Carlisle, Ky.

### THAT SANITARIUM FOR PHYSICIANS

I have just read the editorial in the February CLINICAL MEDICINE on "A Sanitarium for Physicians—Why Not?" That exactly strikes my "altruistic" as well as financial "nerves", and could I interest any considerable part of the profession in this region as a suitable location for such an institution, especially if it were backed by your journal, as suggested, I should donate an ideal and very valuable site, and if put in a position so I could do so, should give a full year's time in its interest, as my contribution to my "day and generation." I am sure that with a little of the right kind of investigation this sanitarium could easily be established here, for the general conditions favor it in a most extraordinary way. If Dr. Abbott or Dr. Butler (he is your "idealist" and *practical* sanitarium man) could visit this place I am sure you could see an opportunity to accomplish great results and to do an untold amount of good to needy ones along the lines suggested in your article.

CHAS. E. DAVIS.

Eureka Springs, Ark.

Now, how shall we go about it to create the institution? Dr. Davis's letter shows that it will not be hard to procure a site; the great difficulty will be to secure the funds necessary for its erection and maintenance. Of course, the ideal plan is for an organization like the American Medical Association, which has the machinery and the money, to take hold of it. But success can be anticipated, even without the assistance of this body, and there are certain advantages of having our home an independent one. Such a sanitarium could quite properly serve those in need, irrespective of sect or school, and this could hardly be expected from an A. M. A. home.

But how, again? We want to draw out expressions of opinion from as many of our readers as possible. Here are a few of the problems that present themselves:

Where should such an institution be located?

How much money will be required, to begin with, for its erection?

How can the funds be supplied for its maintenance?

Is some kind of mutual-benefit plan feasible?

Is there any way in which it might be made partially self-supporting?

How can we organize for the solicitation of funds—and is such a special organization desirable?

How can we secure the interest of those who have the money and the influence—leaders within the profession, as well as men of means outside of it?

Will you, personally, pledge something to start the ball rolling, providing a plan

of organization satisfactory to you is perfected? How much?

I am deeply interested in this, and shall be only too glad to assist in every way in my power, by personal influence, through the columns of CLINICAL MEDICINE, and with money—generously.

W. C. ABBOTT.

Chicago, Ill.

## REMINISCENT

I have followed THE CLINIC for a long time while it has been making its history, and I reckon I am the "oldest subscriber," having taken it *ab origine*, from the time it was a little sixteen-page journal. Even then it had manifestations of the same "spirit" that breathes through its more than one hundred resplendent and well-filled pages down to the year of our Lord one thousand nine hundred and twelve, and I expect to take it as long as I can put up two dollars for the price of it.

THE CLINIC, later as CLINICAL MEDICINE, has been a great weapon for me with which to kill and to stay the enemies of humanity.

Now that I am in a reminiscent mood, let me say that THE CLINIC published, some time ago, a formula which has netted me enough to pay the subscription price for a hundred years in advance. (True as gospel preaching.) "What is it?" "Let me try it?" Very well, subscribe and pay for it. You will find it on almost any page. All you lack may be opportunity to use it. (I refer to a particular prescription in my own case.)

Again, a poor fellow came to me with laryngitis, his voice hushed to a whisper, and the epiglottis, on depressing the tongue, stood up visible for three-quarters of an inch. What next? On page 37, under "Brief Therapeutics," by Dr. W. C. Abbott, you will see that hyoscyamine, strychnine, and aconitine, one granule of each every half hour, is good for this very condition. Just seven such doses did the work. At noon of the same day the inflammation was all gone and the man's voice restored perfectly. Bill, $2.50, paid.

Little Mary, my granddaughter of three months, had been restless all the afternoon and her mamma had been feeding her on Waugh's anodyne for infants; but baby cried on. At last mamma, worn out by the care and worry of the little one, remarked, "Do you reckon I had better give her any more?"

Dr. M. G. Price and his granddaughter, "Little Mary."

"How many have you given her?" I asked.

"Nine in the last two hours," she replied.

I said, "No; let her cry herself to death, but don't kill her with the pills."

I never heard any more from the anodyne save when she got good and ready, she went to sleep, and was none the worse for the little pills. Doctor, don't you think she has won the title of the "alka-

loidal baby"? Here is her picture. She is as pretty as a peach and ready for more of Grandfather Waugh's little pills.

M. G. PRICE.

Mosheim, Tenn.

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[Grandfather Waugh extends congratulations to Grandfather Price! Some time we'll get up a little baby show exclusively for our own "kin." That beautiful little one of yours will be a hard one to beat. However——! The "anodyne" is safe as well as effective, but it isn't to be taken "ad lib." If baby's colic simply *won't* yield to it, "clean out" and revise the diet —ED.]

## SILVER IODIDE FOR WHOOPING-COUGH

I note what Dr. P. E. Hanes has to say, in the January CLINIC, about the use of calx iodata as a successful remedy for the vomiting of pregnancy and for the troublesome and dangerous vomiting in cases of whooping-cough.

Permit me again to remind the readers of the CLINIC "family" that we have in the iodide of silver an invaluable remedy for whooping-cough. It should be given triturated with milk-sugar in 1-8 to 1-6 grain dosage once in six hours. It will abort and cure the most obstinate cases in a week or ten days. I have used this remedy with unfailing success in these cases for the past thirty or more years.

For the nausea occurring during pregnancy, from seasickness and from sick-headache, I have seen nothing superior to parched or popped corn when eaten during these distressing conditions.

GEORGE D. STANTON.

Stonington, Conn.

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[We have been inclined to be skeptical as to the value of silver iodide in whooping-cough, but there have been so many good reports concerning it that we may have to revise our opinions. One New Jersey doctor has treated 275 cases within five months, using silver iodide, emetine and calcium sulphide. He reports excellent results. Some of our Iowa friends think Dr. Hanes's experience was large. What do they think of this one?—ED.]

## EXPERIENCES WITH HYDROPHOBIA IN MEXICO

Hydrophobia has always been a doubtful disease with me, and as much as I have seen from contributors to THE CLINIC, I have not been alone in my doubts. And, as will be seen, there have been good reasons for such doubts in the following, and only, cases I have ever come in contact with, until lately.

In some parts of Prussia the peasants believed that anyone bitten by a dog would bark like a dog upon developing rabies, on the ninth day after being bitten. Well, when I was a boy, I saw a woman who was bitten by a dog considered mad, and upon the ninth day after she commenced to bark and yelp, and what is more, she died about two weeks after. I always remembered that case, as at that time it impressed me very much, but still more so after I understood the power of autosuggestion.

About fourteen years ago, when practising in a town called Apatzingan, in the State of Michoacan, a man was brought to me; and this was a case of "hydrophobia"—but not of "rabies"—if we take the actual meaning of both words. This man told me that, three days before, camping out, he awoke suddenly with a feeling of horror as if a snake had crawled over his naked body. He was sure that it was a snake, *though he had not seen it.* Since then, he felt exceedingly nervous and could not drink water. When asked, he said that he had never been bitten by a dog or any other animal in all his life. I offered water to him in a clear glass and he fell backward in a convulsion. Interested in the case, I begged him to stay and let me do for him what I could, even offering to pay his expenses; but he would not listen; he *knew* he was going to die, and wanted to die surrounded by his family on a ranch fifty miles away. Three weeks after, I was informed that he had died. As will be seen, this case, while puzzling, is not very conclusive evidence.

A few years after that, I saved the life of a dog who was chased by a mob as being mad. Away from the crowd he drank water, and he was perfectly happy and a loving and grateful friend until killed by a jaguar a few years after.

The last cases, however, have been of a different nature and came very close home; and the tragedy barely averted has dispelled from my mind all doubt as to the existence of the dread disease.

I had two dogs, a little Mexican nondescript, two years old, and a great pet; and an eight-months old English bullpup. The little dog was noble and brave, fighting anything that was old and big enough, from a bulldog down, but he would not touch anything young or weak. I could not make him do so. It is but natural that he should come home often with some terrible wounds, received in scraps with other dogs or animals.

When this dog developed a nasty temper, I attributed it to his fighting blood, and when one morning he jumped on the pup I thought it was on account of jealousy, because I was petting her. He obeyed when I scolded him, and left the other alone, running out in the street.

That day, October 19, I had a call to a neighboring town, and owing to the floods which prevailed, I was not able to get home until three days later. Upon my return I found my wife in tears and she informed me that on the night of the same day I had left, the dog had gone mad and bit her and the pup, drawing blood on both. She locked the dog in a room by himself, as she wanted me to see him; but as he chewed a big hole in the door, she was afraid he might get out, and she personally went in to him and chained him. He allowed himself to be chained, but as soon as he was tied he commenced again to rave, and for fear that he would slip the collar off, they had to kill him. A friend of mine and an inmate of the house, whom the dog knew and liked, tried to pacify him, but the dog jumped at him and hung onto the glove, allowing himself to be lifted high in the air.

I found that my wife had been bitten over the right tibia, the incisors being well marked, erysipelas developing. She told me that she had put on mercurial ointment immediately. I could find no trace of the pup's wound.

Two days' ride to the railroad on horseback with an erysipelatous patient, a very frail and delicate woman at that, and raining day and night, with mud up to the horse's belly, seemed an impossibility, so I compromised by going down the river

Dr. and Mrs. Hollmann and the two dogs. The one in front of the doctor made all the trouble.

in an open canoe hewn out of a log. After two days we arrived at a place where we could take horses, the erysipelas being so far improved, and we took the train the same day, arriving at San Luis Potosi early in the morning. That same day she received her first injection of the twenty-four that complete the Pasteur treatment, it being two injections a day. We left San Luis on November 18, arriving home on the 22nd, and were met with the disagreeable news that the little bullpup was mad, having developed the disease two days before.

The bitch was tied to a chain which in turn ran on a wire, giving her a big runway and plenty of exercise. I had left orders

not to turn her loose during my absence. Strange, for a bulldog, she had the most gentle and loving disposition of any dog I have ever seen. Upon examination, I found her tongue swollen and black at the apex. There was purulent conjunctivitis; also partial paralysis of the fore-limbs. Her tail hung in a curve with tetanic rigidity, but upon the slightest touch she would draw it as with a very painful convulsion. Gentle and loving as always, she recognized master and mistress, and even attempted the playful tricks she reserved for the latter. She tried to drink but could not, and in her agony she chewed the vessel, some ricinus trees that were near, and the boards of the kennel. As if in rage, she tore up her bedding, composed of sacks and blankets, and yet she would not bite a little pig that strayed within reach at that moment. May it not be possible that sex and age modify the symptoms in different individuals?

A thorough examination was made impossible by the very natural fear of my wife and the fact that the physician and investigator's instinct was not as strong in me as my love for my best friend, and, as a last friendly service, I ordered her to be put out of misery on the afternoon of my return home.

Another little dog about the same age had been bitten by the same dog the day before mine was bitten, and that one became sick a day before mine did; which establishes the time for complete incubation as thirty hours in both dogs. I do not know how this dog acted, as I did not see him, he being killed a day before my return.

I must not finish this letter without some remarks on the Institute where my wife received treatment. San Luis Potosi has not a regular institute, but this is a department, a small but very efficient affair, attached to a state board of health, called here "Sanitary Department." Dr. Soberon is the General Health Inspector for the state, and Colonel-Doctor M. M. Martinez is at the head of the Pasteur, or antirabic, department. Both are very courteous gentlemen, and speak flatteringly of the United States, where they have taken some postgraduate courses.

Dr. Soberon is a decided friend of dosimetric medication, although he has but little opportunity to practise it. Dosimetric granules, as we get them from France, are the thing to induce a reputable physician to change, for the reasons already set forth by me in an article published about two years ago. For the reasons there set forth I prefer the American granules.

A. R. HOLLMANN.

Tanquian, San Luis Potasi, Mexico.

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[There are still good men who doubt the existence of rabies as a distinctive disease, but the evidence of its reality is pretty nearly overwhelming. The disease can now be diagnosed in the laboratory by microscopical examination, sections or smears from the hippocampus major nearly invariably showing the presence of the socalled Negri bodies, found in the ganglion cells.

The "nine-day bark" of the Prussian peasants is undoubtedly autosuggestive—not due to rabies. The period of incubation of hydrophobia, in man, is six weeks to three or four months, sometimes more. Of course we can only guess as to the nature of the ailment of the man who *thought* he had been bitten by the snake.

The description of the symptoms of rabies in the "pup," as given by Dr. Hollmann, is pretty nearly classical, though the hind limbs, not the fore limbs, are usually paralyzed; perhaps this apparent discrepancy is due to a *lapsus* of Dr. Hollmann's pen.—ED.]

## A MESSAGE OF GOOD CHEER—AND HELP IN OBSTETRICAL WORK

*Dear Dr. Abbott:* Here is $2.00 for CLINICAL MEDICINE—also my very best wishes for many "happy New Years" for you. Please don't die until you can find some young chap capable of running the journal as well as you have. There are some "one-man" papers and magazines we could spare all right, but I should hate to see the sparkle die out of the old CLINIC. So keep her going, and, at the same time, "take keer of yerself."

It is my "usual custom" to cure pneumonia in from three to five days, following

your general plan. In fact, I don't get much credit any more in such cases; they get well so quickly that the "victims" refuse to believe they were ever in danger.

Calcium sulphide is great stuff. I'd rather have it than unlimited bacterins, if I had to use a single drug to treat infections with. Clears up boils, acne, some cases of eczema, besides some more serious ailments. For instance, a man came to me with an infected finger, which had been lanced, and a new abscess was forming on the back of the hand. I saturated him with calcium sulphide and the hand began to get well at once. The second abscess didn't amount to anything.

Not long ago, in making a postpartum call, I found my patient, a young woman confined three and a half days before, with a severe chill. Temperature of 101.6° F., pulse 120. Breasts were soft and painless; bowels had been moved that day with castor oil; lochia nearly normal—perhaps just a trifle putrid.

What ailed her? I don't know. I didn't wait to find out. I gave 3 grains of calomel in divided doses, 2 grains of quinine and 1-4 grain of calcium sulphide. Then I had the husband sit up all night and give quinine and calcium sulphide, each 2 grains, every two hours. The next morning her temperature was normal, pulse 84, and she was perfectly comfortable except for buzzing in the ears.

Was she just starting to become septic? Would she have been seriously sick, perhaps lost her life, if nothing had been done? I don't know, never will know, and "never shall understand," but I shall probably give lots of calcium sulphide in similar cases hereafter.

By the way, having attended probably an average of one confinement case a week since June, 1903, I have still to see a mother die from sepsis following childbirth. Let us pause a moment and recall the names of Semmelweiss and Holmes in this connection. Our lack of mortality in modern midwifery seems so much a matter of course that we may forget to give honor to whom honor is due.

One good feature about the doctors of the olden days was this: the drugs they had they had faith in; and they used them to effect, physiologic or otherwise. Active-principle therapy is restoring faith in medicine. Perhaps the family physician will once more become the well-beloved "uncle" of his community.

E. A. FRENCH.

Plainview, Minn.

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[Thank you, Doctor. Shake! I'll "take keer" of myself in the best way I know how—by keeping busy. It's the only way I know. Don't worry about the "sparkle" in CLINICAL MEDICINE. I'm not the only persimmon on the alkaloidal tree. There's a bunch of them hanging on around "headquarters," getting riper and better every minute. They'll keep up the supply of sparkle and snap. Meanwhile the frost of experience is developing new "alkaloidists" every day. Come down to Chicago, some time, and I'll introduce you to our "faculty"—and after that you will have no fear as to the future.

I approve of your approval of calcium sulphide. It is a great drug. While it isn't a competitor with the bacterins (each class of remedies has its own field), it does work that no other remedy can do. You demonstrated that in the infected hand and in your case of sapremia—if that is what it was. I don't know.

Glad you put in that tribute to the old-time doctor. We don't half appreciate what these old masters in the art of drug-giving did for us. We are so absorbed with the present, so anxious to acquire the spirit of prophesy, that we forget too often the earlier generations, who dug deep and built the strong foundation upon which our newer structure is mounting skyward.—ED.]

## APOMORPHINE: NEW THERAPEUTIC USES OF AN OLD REMEDY

According to the textbooks, when apomorphine is given hypodermically in doses ranging from 1-60 to 1-5 of a grain it acts directly upon the vomiting center in the medulla. I have used the drug for the past sixteen years and am finding new uses for it every year.

At first I employed apomorphine to relieve the "jag" pressure in cases of plain "drunk and disorderly." In such cases it is more potent than the police, inasmuch as the patient never fights back. In one minute a hypodermic of 1-10 grain will change a fighting demon into a subdued mortal, whose only want is a place where to vomit and some good Samaritan to hold his unhappy head. Emesis will recur about three times in the course of the

Dr. John M. Elderdice and wife, Mardella Springs, Md.

half hour following the injection, and this is followed by a natural sleep lasting from one to four hours.

Getting such marvelous results from its exhibition in mania a potu, it is but natural that its administration was tried in all maniac cases, as well as in hysteria and catalepsy, not only for its antispasmodic but also for its hypnotic qualities.

In simple cases of tense muscles in neurasthenics where there is an *inability to sleep*, apomorphine should be given in small doses ranging from 1-100 to 1-60 of a grain, for the reason that this small dosage will produce sleep and relaxation without causing emesis or even nausea.

An attack of spasmodic *asthma* may be cut short by its use. It relieves the spasm, unloads the bronchi of all tenacious mucus, and produces a quiet sleep.

Gallstone, renal and intestinal *colic* as well as gastralgia are relieved by an ordinary dose of the remedy; oftentimes the attacks will not recur. In such cases it not only relieves the pain more quickly than morphine but has a stimulating rather than a retarding effect upon the organs of excretion and secretion.

In puerperal *eclampsia*, with throbbing carotids and extreme nervousness, I find that 1-15 grain, repeated as indicated, relaxes the tense muscles, empties the stomach, and acts as a good diaphoretic and diuretic. It possesses all the good qualities of morphine and chloroform in this disease, without their untoward effects.

In tedious labor caused by a *rigid os*, it relaxes the whole genital canal, changing a difficult labor into a comparatively easy one. It has not, so far as I have observed, lessened in severity or frequency the pains of labor.

Persistent *vomiting*, depending on spasm of the muscular system, is an indication for its exhibition in physiologic dosage according to age and condition.

In poisoning from depressants or narcotics, this drug must be used with caution, unless the patient is seen before profound narcosis or depression ensues.

Apomorphine may be administered by the mouth, but, as its absorption is slow by the stomach, the results are tardy and uncertain.

When it forms the basis of one of the many *liquor cures*, I find the patient soon becomes tolerant of its effect and the dosage must be rapidly increased. In the case of one drunkard, I have had to give as high as 2-5 of a grain to a dose in order to produce emesis on the third day of its exhibition. However, when this patient came under treatment, three years later, for the "cure," 1-10 of a grain was all he needed throughout the whole treatment, which lasted three weeks and where the drug was used at least once daily.

In conclusion just a word as to its administration.

Some writers advise using a fresh preparation, made for the occasion from the crystalline powder, never from the amorphous, but I have used the ordinary hypodermic tablets made by reliable houses and have always found them effective.

Do not begin the use of apomorphine in too large a dosage, unless the need be great. I have seen rather *alarming effects* from the hypodermic administration of *1-10 grain*. Such effect may be counteracted by full doses of strychnine and atropine subcutaneously, adrenalin intervenously, and by stimulants per rectum or by hypodermoclysis.

Even an old "soak" will vomit freely in from forty seconds to one and one-half minutes from the exhibition of 1-20 grain hypodermically.

To a child one and one-half years old I give 1-100 of a grain. To a child two years old I give 1-80 of a grain, and increase the dose when needed.

The action of apomorphine is immediate as regards its emetic effect, but its soporific and depressant action lasts for about four hours.

E. J. MELVILLE.

St. Albans, Vt.

[This is intensely interesting to me. Wish we could get a lot of clinical experiences with this drug from the "family." Can't we?—ED.]

## "EQUITY," DR. TAYLOR'S JOURNAL OF SOCIOLOGY

There probably is not a physician in America who is unacquainted with *The Medical World*, but how many are there who know that Dr. C. F. Taylor, its editor and publisher, is also engaged in a fight for economic and sociological reform. He publishes a little magazine called "*Equity*," the price of which is 50 cents a year. I have just been looking over the January number and have found in it so much tht is interesting to me that I must urge readers of the CLINIC to get it and read it.

*Equity* is pledged to fight for direct legislation, i. e., law-making by the voters themselves. It believes in the initiative, referendum, recall, proportional representative, and the short ballot. These subjects we are likely to hear a good deal during the next campaign, especially if Senator LaFollette and Colonel Roosevelt have anything to do with it, for both of these progressive leaders are pledged to the initiative, referendum and recall.

The little magazine contains all of the latest work along these lines. It presents the facts and you can draw your own inferences. We urge as many of our readers as desire to keep in touch with this subject (and every one should) to send Dr. C. F. Taylor, 1520 Chestnut St., Philadelphia, Pa., fifty cents for a year's subscription.

## LET'S DOUBLE OUR CIRCULATION

As announced on the cover of our March number, we are now in the midst of a red-hot campaign to double the circulation of


DR. RALPH ST. J. PERRY
All "fixed" for any old blizzard. Another article from the doctor next month.

CLINICAL MEDICINE. We asked your help then, and now we are going to ask it again. In order to build up our list very rapidly, we made an offer, which we think should appeal to every one of our friends. It is this: with every renewal-remittance of $2.00 the subscriber will be permitted to present a complimentary subscription to the journal for one year to a medical friend. Thousands of our readers should take advantage of this offer, which will place CLINICAL MEDICINE in the hands of many new readers. Also, any doctor can save half on his own subscription if he will go out and collect a dollar from his neighbor, put it with a dollar of his own and fire it in to us. Or, if he will get a *new* subscription at $2.00, his own subscription will cost nothing.

Here's another plan: One good friend of ours, Dr. E. W. Brooks, of Beecher City, Illinois, President of the Effingham County Medical Society, sent out to every member of that society, a postcard on which he says:

"I am having a sample copy of CLINICAL MEDICINE sent to you and I want you to read and study the article, 'Let's Stand Together,' on page 251 in this journal for this month. After reading this article please let me know what you think about it. Our program for next meeting will be sent in a few days."

At the doctor's request, we mailed copies of the journal to all those receiving his card. We feel quite confident, and so does Dr. Brooks, that every one who reads that number of CLINICAL MEDICINE and especially that editorial, will want to join us.

How many other readers of our journal will volunteer to bring the journal to the attention of their medical neighbors, as Dr. Brooks has done?

*Help us push.* We ask the help of every interested member of the family. *Will you help?*

## CONGRATULATIONS AGAIN

After reading THE AMERICAN JOURNAL OF CLINICAL MEDICINE for several months, I feel that it is my duty to echo its praise, along with its many other readers. Drs. Katz and Moody, in the February issue, have exactly voiced my sentiments regarding the journal.

I have already set aside another journal for CLINICAL MEDICINE, which, in my judgment, is, without doubt, one of the best journals presented to the medical profession. The more one reads its pages the more he wants to read them.

That this will be the most prosperous year in the history of THE AMERICAN JOURNAL OF CLINICAL MEDICINE is the wish of

C. A. W. SARGEANT.

Holly, La.

## THE RELATION OF SOCALLED BRILL'S DISEASE TO TYPHUS FEVER

In *The Public Health Reports* for February 2, Drs. John F. Anderson and Joseph Goldberger, of the Public Health and Marine-Hospital Service, report the results of their investigations on the nature of "Brill's disease," which are as interesting as they are important.

It will be recalled that, in 1898, Dr. Nathan E. Brill, of New York, reported 17 cases of a disease clinically resembling typhoid fever but without the Widal reaction, and that in April, 1910, he reported a study of 221 cases of this same disease observed at Mount Sinai Hospital, New York City, from late in 1896 to December 1, 1909. He gave the following definition of the disease which is called after him:

"An acute infectious disease of unknown origin and unknown pathology, characterized by a short incubation period (four to five days), a period of continuous fever accompanied by nervous headache, apathy and prostration and profuse and extensive erythematous maculopapular eruption of about two weeks' duration, whereupon the fever abruptly ceases, either by crisis within a few hours or by rapid lysis within three days, when all symptoms disappear."

Dr. Brill attempted to establish the similarity of the disease described by him and Mexican typhus fever, but, according to a letter to *The Journal of the American Medical Association*, failed in this attempt.

Doctors Anderson and Goldberger, by means of blood drawn from the arm-vein

of a patient in the wards of Mount Sinai Hospital, ill with Brill's disease, infected a number of rhesus monkeys, and they report their observations, including post-mortem findings. Having established the susceptibility of the rhesus monkey to infection by inoculation with blood from a case of Brill's disease, Dr. Goldberger proceeded to Mexico City, carrying a number of Rhesus monkeys, some of which had recovered from infection with the virus of Brill's disease, and found that these latter were immune to inoculation by Mexican typhus fever. He also found that monkeys recovered from an infection with Mexican typhus fever were immune to a subsequent infection with Brill's disease, so that the disease described by Brill may be considered identical with the typhus fever of Mexico; and, further, inasmuch as the New York strain is undoubtedly of European origin, we may also conclude that the typhus of Europe and the Mexican typhus fever are identical.

In view of these findings, cases of Brill's disease that may be observed should be treated with the utmost care, in order to prevent a recurrence of outbreaks of typhus fever such as have happened occasionally in times past.

Dr. Brill's description of the disease first reported by him is highly creditable to his close observation and may well be taken as an example by practitioners at large.

## HIGHER POSTAGE RATES FOR MAGAZINES

The Hughes Postal Commission has made its report, and the President and Postmaster-General have finally recommended to Congress that, in accordance with the Commission's suggestions, the postage-rate on second-class matter should be increased to two cents a pound, instead of one cent a pound, as the law now provides.

This means that the expense of producing magazines will be enormously increased. It is equivalent to a tax running into thousands of dollars annually for many a publication. On our own, for instance, it will increase the expense of production from 12 to 20 cents a year for every subscriber. Calculate for yourself how much of a tax that means to us. Hundreds of good journals will be forced to suspend publication if this becomes law.

Contrary to general belief, the magazine-publishing business is not profitable. The number of journals which make money is relatively few. The recent failure of *Hampton's Magazine* and *Success* are striking illustrations of the difficulties besetting the journal publisher. The only way that many publishers can bear this burden will be through increasing the subscription price of their journals, so that ultimately the tax will fall upon the people. The increased postage charge is a tax upon knowledge, upon education; for, as every one knows, the public press is the most potent, the most powerful factor for the formation of public opinion, and an assault upon the press is an attack upon freedom of expression. Naturally the journals to suffer most will be those which are produced as nearly as possible without a profit, in other words, those published for the good of the mass rather than to enrich their owners.

In the last analysis, the decision as to whether there shall be an increase in the subscription price of our magazines rests in the hands of the people. They can secure the passage of the proposed bill to increase its rate, or they can prevent its passage. Everything depends upon the freedom with which they express their opinions to their congressmen and senators —who are their servants. If you, the readers of CLINICAL MEDICINE, are in favor of this bill, and willing to pay more for this and other publications, write to your representatives in Congress and tell them so. If you are against this tax upon intelligence and progress (for it can be nothing else), then tell them that.

There is no good reason for the passage of this bill at the present time. The Postoffice Department is now self-sustaining, although it never was intended to be a money-making factor in our government. The Postoffice Department is under just as many obligations to foster the welfare of the whole people as is the War Depart-

ment, the Interior Department or the Department of Agriculture, every one of which represents an enormous expenditure without an appreciable income. There is just as much reason to demand a profit from these latter departments as from the Postoffice.

The only excuse, mind, which has been made for the levying of this tax is the desirability of making a one-cent letter rate, which the increase of income would make possible—perhaps; the only considerable number of people who are demanding such a reduction in letter-postage are the large wholesale establishments and catalog houses, who would be still further enriched by a concession of this character.

In conclusion, we want to say that if a change of this kind is decided upon by our Government, we shall take it gracefully, although it will mean either a shrinkage of income or an increase in the subscription rate. But—it is up to you!

## A HOMEOPATHIC VIEW OF CALCIUM SULPHIDE

My experience with calcium sulphide, or hepar sulphar, has extended over twenty-seven years of active general practice and I give this to you for what it may be worth. *I have never failed to obtain desired results* with this remedy when the remedy has been truly *indicated*, i. e., when, according to similia, the symptoms presenting corresponded with the symptoms known to have been produced in healthy persons by this same remedy. And as I have been so long out of the practice of prescribing by the name of the disease, instead, as we prescribe, by the agglomeration of similar symptoms, I am no longer an authority on anything but the homeopathic method—and not much of one, even of that kind, I fear, though I never fail to adhere to our law when my knowledge permits.

I can readily see wherein you all feel justified in prescribing hepar in scarlet fever, for, according to my studies, I find it indicated also in scarlet fever; only we are governed, in our prescription in such cases, by such symptoms as these: stitches in the throat extending to the ear, worse on swallowing; swelling of the parotid and submaxillary glands; early decrease of the urinary secretions, with traces of albumin and casts; discharge of fetid pus from the ears; ulcers and specks on the cornea, and so on. In other cases, according to our method of prescribing, we should use something else; always, though, only that remedy which has the power of producing in the system a condition contrary to the disease and its influences.

In measles we should prescribe calcium sulphide only when such as the following symptoms were the most prominent: Intense headache above the nose; darting pains in the ears with crackling noises when blowing the nose; feeling as of sand in the eyes; roughness and scraping sensations in the throat; cough caused by uncovering any part of the body, and so forth.

In diphtheria, while mercuric cyanide would be the nearest general similium to the condition, we should prescribe calcium sulphide for the following specific symptoms: Pressive and constrictive sensation in the throat; stitches in the throat extending to the ear, worse on swallowing. Sensation as if a fish bone or splinter were sticking in the throat. Sensation of a plug, or internal swelling in the throat when swallowing, etc.

In smallpox, while baptisia, belladonna and veratrum viride are oftenest indicated in the initial stage; vaccininum, maldrinum, tartar emetic and thuja in the stage of eruptions; mercurius, melandrinum and lachesis in the suppurative stage; and sulphur in the stage of desiccation; we should prescribe hepar sulphur in specific conditions, for instance: Where we found high fever with redness of the face and hoarseness; stitching pains extending from ear to ear when swallowing; swelling and suppuration of the glands; unhealthy skin, slight injuries inducing suppuration and ulceration, etc.

In the other diseases mentioned in the pamphlet on calcium sulphide we should, as you may have noticed, be governed solely by those symptoms, in any condition regardless of name, prescribing hepar sul-

phur for a certain specific agglomeration of symptoms peculiar to this remedy.

In all this, my good friend and frater, you will see that, while I should be more than pleased to give you a history of my own experience with this remedial agent "in preventing such maladies," I have had experience only in their cure with this remedy. I will add, however, that we have still another and a good law governing prophylactics, to wit: that found on page 273 of a German edition of what is called "Boenninghausen, Aphorismen des Hippokrates," which says: "Only that remedy can prevent a disease that has the power of curing the disease, and of producing in the system a condition contrary to the disease and its influences."

R. B. LEACH.

Paris, Tex.

## WORMS IN CHILDHOOD

A clinical case was detailed before the Allen County Medical Society about as follows:

Female infant, six months old, began having convulsions, and up to the time of the description of the case had had a convulsion every three or four hours for about twenty-four hours. Slight fever—100° F. or a little higher. Between attacks the infant apparently was normal and feeling playful. Digestion fair, bowels regular.

The writer was asked to discuss the case, the question propounded being as to the cause of the convulsions. The probable cause named was gastrointestinal irritation and toxemia. Intestinal parasites (the roundworm particularly) were mentioned as a possible cause. This idea was scouted as impossible in a breast-fed infant of six months and in a clean, sanitary home of the upper class.

The textbooks say little about intestinal parasites except in older children. Can you or CLINICAL MEDICINE readers give me any authentic cases or statistics of frequency or possibility of roundworm in (strictly) breast-fed infants in the early months of life.

Babies are handled by adults and children who themselves may be discharging the ova, and I believe that the teaching today is that no intermediate host is required. Therefore (ordinary washing of the hands notwithstanding) the fingers of the adult or child may become contaminated in bathing or their own toilet, incident to cleanliness after movement of the bowels, and thus parasitic ova be transferred to the infant's hands, and thence, with the known tendency of the infant to suck its hands, to its interior.

Again, the roundworm infests domestic animals, such as the dog, cat, pig, horse, and even domestic fowl. Therefore, the soil, wherever these animals discharge their feces, may be a source of infection. And even supposing the family has no pets or domestic animals of any kind, dogs overrun the streets, alleys, and yards everywhere. Furthermore, adults walk the streets contaminated by the feces of infected animals. When such persons enter the house, they may contaminate the floors and rugs over which the child creeps and from which too often various articles are picked up that have fallen on the floor and without cleaning are used about or given to the child.

Hence, it is my opinion that it is not impossible for a child of a few months to be the host of the roundworm, unless the child is kept in a sterilizer and hand sterilization carried out rigidly, as for surgical work.

J. G. WALKER.

Iola, Kan.

[We are inclined to agree with Dr. Walker —but what say the "family?"—ED.]

## OUTDOOR LIFE, COLD, AND CONSUMPTION

Until my twentieth year I lived among and was in close contact with western farmers. I know how the greater part of their existence was spent in the open and that their houses were not air-tight structures, while their living rooms were not over warm and fire over night was unknown. There was no steam-heating, and little burning of lamps. Drift-snow on the beds was a common thing. Never-

Working force of Gray Gables Hospital, Neligh, Neb. Dr. A. F. Conery standing.

theless, pulmonary tuberculosis was prevalent, as were pneumonia and pleurisy. I may explain that my father practised medicine among a community of robust German farmers.

Not very long ago I spent two years on the Isle of Pines—south of Cuba. The natives were of Spanish descent, of several generations back, while half of the population of twenty-five hundred souls were West-Indian negroes, of first or second generations. These people are indoors only during their short sleep, say from 10, 11 or 12 p. m. till 4 or 5 a. m. Barring a few exceptions among the better class, their abodes are flimsy shacks of the tropical type, and all day the *constant* winds (pure from the Caribbean) blow through them; although, it is true, probably a majority of the people closely shut doors and windows during sleeping hours, and sedulously guard against coughs and rheumatism, which they greatly dread. (Does "experience" of a populace count for anything?) These inhabitants of the Isla de Pinos are rapidly being decimated by consumption. I will add, though, that their habitations have no floors, or else rough and porous ones, and they spit about indiscriminately. Also, they are, probably, more or less underfed.

What induces me to write this is the very latest reports coming from Alaska, to the effect that full one-half of the population of that subarctic and arctic country are victims of tuberculosis, and our government is being importuned to devise means of relief.

What now? I am not minded to attack any theory; but I am looking for enlightenment and a rational coordination of facts and theories. Certainly, either seemingly discordant facts must be harmonized, or else the current theory of "air-hunger" and of frigotherapy is untenable. The facts may be assented to, but not necessarily the explanation. But very many of the medical profession have seen and described "facts" which, after the ebullition of the first enthusiasm of a "sure cure," were found not to be facts at all. In my fifty years of conscious and intelligent observation I have witnessed so many wild-fire fads come and depart, that I may be pardoned for being skeptic. And I am frank to confess a conviction that the present vogue of fresh air and cold will pass, although leaving a fair residuum of

good in this direction. For the present I am inclined to say with one of Schiller's characters:

"Erklaer mir, lieber Polydur,
Diesen zwiespalt der natur."

The trouble is, there are involved, in most problems of this kind, an unfathomable number of interlinking factors, while innovators take up and exploit just a single one. So, also, an alleged fact may be a fact, but the attempted explanation be entirely wrong. Who knows for sure why consumptives adopting the outdoor cold life feel improved? Take the case of tuberculous school-children. All we hear about is the cold fresh air. But what about the adjuncts of rest, nutritious feeding, relief from worry and hard study, and all that? Of course, dried-out, overheated, dust-laden air is injurious and depressing, but that proves nothing, or very little, for the extremist side.

For my part (nor am I alone), I am absolutely convinced that the fresh-air cranks of the day are killing off more people of subnormal resistance (congenital or acquired) than they are benefiting; indeed, if the Recording Angel does his duty I should not want to stand in their shoes. What insanity! The whole living generation brought up in and daily perforce exposed to present conditions of indoor life, and all at once expecting them to get used to such a radical change—congenital weaklings, chronic invalids, the aged.

How can you revolutionize our present social arrangements and customs? You can't. If you can rear up a new generation, from little up, in the cold-air environment, very well—but you must cast out all modern adjuncts of civilization: your steam-heated rooms, your labor-saving devices, your elegant feeding, social life and high-pressure business life, all attempts to do advanced work of any kind, either intellectual, artistic or mechanical. Folks running around in Eskimo garbs, in a chill climate, cannot be civilized—but neither can that be in the tropics; for civilization blooms and flourishes within narrow climatic limits, north and south.

ADOLF G. VOGELER.

Chicago, Ill.

[The difficulty is that, following the custom, our friends begin with the theory and then bend or pervert the facts to suit it. Prof. Vogeler is right; and here, as with every climatic resort for the tuberculous, the sparse cures are won at the expense of a well-filled graveyard.—ED.]

## A QUININE ERUPTION

The other day I gave a woman a 5-grain capsule of quinine, and in ten minutes her face began to swell and an eruption appeared on the entire body, with intense itching. Her teeth were chattering and she said she felt cold. The swelling of the face continued until her eyes were almost closed up, and the eruption looked just like a crop of flea bites.

I did not know what to do, so did not do anything. In two hours she was all right. What ought I to have done? Of course I did not give any more quinine.

The case as described is not exaggerated, if anything it was worse.

I shall appreciate an answer to the above through the pages of CLINICAL MEDICINE.

R. E. DAVIS.

Lluvia de Oro., Chihuahua, Mexico.

[These cases of drug idiosyncrasy are exceedingly interesting. As to what really causes them we are still in the dark, though there is a growing belief that in some way there is an etiologic analogy between these symptoms and those occurring in anaphylaxis, or in serum disease.

There are a number of drugs which occasionally cause this syndrome, consisting of an urticaria-like eruption, cardiac weakness, dyspnea, possibly headache, and joint-pains, etc. In the recent literature we have noted cases of this kind following the administration of antipyrin, iodoform, urotropin, belladonna, atropine, and other drugs.

The symptoms are similar to those which sometimes result in susceptible individuals from eating strawberries, cabbage, shellfish, and, as already said, after injections of serum—though, in the last instance, they do not appear until after several days. (Carnot has noted a "period of incubation"

of from eight to twelve days, after antipyrin, when given to children.) Bruck believes that iodoform intoxication is not due to the drug itself, but to an iodizing reaction upon the albumens, which latter products in turn induce the symptoms.

To be perfectly frank, *we do not know* why these peculiar symptoms appear—and, therefore, have no basis for *scientific* treatment. On general principles, however, we should seek the elimination of the offending drug as quickly as possible. A quickly acting cathartic should be administered, and the bowel washed out with enemas. Empirically, it has been found that alkalis are useful in alleviating the symptoms, so sodium bicarbonate may be given, in good-sized doses, in enemata if preferred. Cardiac weakness calls for cactin, or digitalin, and strychnine; nervous irritability for gelseminine, cicutine or the bromides; the itching and burning of the skin for alkaline compresses. That seems to be about all we can do, and fortunately the symptoms usually pass away quickly, and real danger is rarely, if ever, present.

We should be glad to have reports from our readers regarding these drug eruptions. Please tell us what drugs have produced them in your practice. What symptoms were produced? How soon did these symptoms appear after the drug was administered, and how long did they last? What measures or drugs gave most relief?—ED.]

## PRACTISING MEDICINE ON CAPE HATTERAS

I have often read with pleasure the many interesting articles from doctors who, like myself, are located in isolated regions, where they never see or get in touch with brother practitioners or anything pertaining to the medical world in months, except for reading their periodicals. How little the other doctor in his comfortable office knows of the practice of medicine in comparison to those who have from forty to fifty miles of territory to cover, and this by land and water, day or night, in all kinds of weather and seasons. The nearest doctor to me is fifty miles distant, the nearest drugstore is one hundred miles away, and Norfolk (Virginia), where is located my closest hospital, is one hundred and fifty-two miles from my place—and one hundred of that is covered in a sailing vessel with a 6 x 6-foot cabin that may harbor two or even more passengers. And in this delightful parlor you, the other passengers, and, maybe, your patient, must eat, sleep, and look after your personal wants for from fourteen to twenty-four and sometimes as long as thirty-six hours, be it winter or summer.

Cape Hatteras is the most easterly point of the western hemisphere. It is bounded on the south, east, and north by the Atlantic Ocean, on the west by Pamlico Sound, thus constituting it as an island. Cape Hatteras Inlet divides it from another island, called Ocracoke, to the south, while New Outlet separates it from Roanoke Island on the north. This island is triangular in shape, the apex reaching out into the ocean several miles. It is this point that is known to and dreaded by mariners and seafaring men throughout the world. It is called the Diamond Shoals, also the Graveyard of the Atlantic; and a word about those shoals will not be amiss.

Captain Ed Stone, who is keeper of the United States life-saving station at this point (and it is the station in the service that imposes a responsibility above all others) told me that a large sailing vessel has gone down in the evening, and the morning after you could not see the top of its masts; and then, maybe, another would be sunk in the same spot, and twelve hours later you could find no trace of that one either. How often this process has been repeated it is impossible to say. Captain Stone has been at this station for twenty years, and he says that if he had the money spent on the anchors alone that are buried in this watery graveyard he would be a rich man. The ocean beach from outlet to inlet, forty miles, is strewn with wrecks of every description, which eventually are broken up for the crude material to be got from them.

Volumes could be written about the government service alone, and the amount of good these men do can be appreciated only

by witnessing them working in a storm at sea. It is these government employees who are the financial backbone of this island, not on account of the amount of money they earn, but from the certainty of their wages. The fishermen, hunters, trappers, and pensioners bring in 200 percent more, but this income is not assured, except the pensions.

This place is a world by itself. The inhabitants know little and care less about the outside world. Happiness and contentment reign supreme. There is not a policeman or a jail on the island. There is a peg-legged "squire," who is the whole law in himself. He writes the warrant, serves it, tries the cases, collects the fines. I believe seven out of the fourteen "cases" which I took to Norfolk for operation had never seen a streetcar or railroad before that time, I being the first physician to take patients off the island for operation.

My first hospital case was that of a young married woman with two children. Her history was, that, about fifteen years ago (she is thirty, now), while having her menses, she was caught in a rainstorm and got wet to the skin. From that time until she was operated upon she had swooning spells or fits once and sometimes twice a month, accompanied by excruciating pain in the region of the liver. I treated her for about seven weeks, with varying results; in fact, she grew worse and the spells became more frequent. She had a decided idiosyncrasy against all narcotics, and in the latter part of my treatment at home I resorted to chloroform, keeping her in a semiconscious condition for from one to two hours at a time. Finally I prevailed upon her and her husband to allow me to take her to the hospital.

We had been aboard the schooner only about one hour when she had one of her severest attacks. We were eighteen hours crossing that one hundred miles of water, and sixteen of the eighteen hours I kept her partly under chloroform. Once on land, she seemed to revive and felt fairly well aboard the train into Norfolk, where a waiting ambulance took us to the hospital. Arrived there, I immediately called up Drs. Payne and Payne (father and son), who are in charge of St. Vincent's hospital, a five-hundred bed accommodation.

The consultation resulted in the decision to operate in two hours, and Dr. Payne Jr. performed the operation. Aspiration of the gall-bladder brought forth a thick syrupy fluid as black as tar and also a dozen minute calculi, the largest about the size of No. 8 shot. Examination revealing nothing pointing to hepatic disturbance, a drain was inserted in the wound, and from this over a quart of the same kind of thick fluid oozed during the next seven days. When finally the discharge became normal, the drain was removed and the wound allowed to heal. This woman has had no further trouble since then. I have seen and assisted at a great many operations during my eighteen months of hospital service, but never have I witnessed such stuff as came from this woman's liver.

Another very interesting case once started me for the hospital, but the same terminated favorably before we got there. I was called, one evening, to attend a young woman in confinement. When I arrived there I found a midwife who had been in attendance for several days, and of whom I will make mention later.

I found the child's left arm and a part of the cord protruding, and the patient told me the sac had been ruptured by the midwife ten hours before. I scrubbed up and inserted my left hand, to do a "version," if possible, but found the child adhered to the womb as tightly as if it were part of it. Labor had long since ceased and the uterus was as dry as a bake-oven, and this cord and arm were blocking any and all rotary movements. After working on the woman until midnight, I gave some medicine designed to induce labor and to give her some much-needed rest. Returning in the morning, I found her feeling much better, but everything else unchanged. I worked for one-half hour, but without any success. Thinking I might have a little advantage, I put her under chloroform and labored on, but to no avail. I even amputated the child's arm at the shoulder and cut off the cord as high up as I could reach—useless surgery here.

I now concluded it was a hopeless case, and told her people that she must go to the hospital at once. Luckily a sailing boat was just making preparations to leave. The patient was put in a two-wheel cart and driven to the shore, over a mile distant. She was transferred to a small boat, then rowed a mile to the sailing vessel, where she was lifted aboard and put in the aforementioned 6×6-foot cabin. I again began treatment at once, trying to bring on labor. She was a strong, rugged young woman and could stand a severe test, physically as well as medicinally.

We left Buxton at 1:30 p. m., with a cold drizzling rain falling. There were two other passengers—both men—which did not give much room, particularly when one of the crew came down. Everything went well until about 9 o'clock that evening, when the patient began to complain of abdominal pains. They continued to grow in intensity, and at about half past ten she whispered to me that she felt the child moving. I ordered the cabin cleared, and in forty minutes I had her relieved of the child and the placenta.

But there my real work started. With the placenta came the largest hemorrhagic flood I ever witnessed. Imagine yourself in my position. My only resource was a hypodermic outfit—no clothes, no bandages, no hot water, not even a fire. I took the pillow-slip from off her pillow and with that packed the uterus, and her heavy canton-flannel drawers I used as a pad to absorb the blood. Next I injected morphine and atropine. Then I went on a hunt for some vinegar, but there was not a drop on board. I happened to find another pillow, and part of this I used to make a T-bandage, and with what remained I washed and cleaned her, with the aid of cold (!) water. I repeated the hypodermic medication every half hour for three doses, when I found the hemorrhage had stopped. Then I told her to try to go to sleep. She did sleep until we reached port, early in the morning, about 6:30 a. m., when I went to a drugstore, bought what things I needed, and returned to the boat and made the patient comfortable.

The woman remained aboard and, with me, started homeward that same evening. She has enjoyed good health ever since. A doctor friend of mine asked me what I did with the baby. I told him it received the full honors of an admiral buried at sea. I hope it has an admiral's place in heaven; but it did cost me a lot of trouble and worry trying to find its way to this earth.

Medical training and eighteen months of hospital work taught me, and I certainly do, and must, believe in the efficacy of hygiene, prophylaxis, sanitation, and all that. Still, right here, in my own territory, there is that same midwife who confines from two to five women every week. She can neither read nor write and knows no more about medicine than I do about a Wright biplane—but, with the exception of one instance, I have never heard of a septic case in her practice. She could not deliver the child, and when I was called the child had been dead from thirty-six to forty hours. I succeeded in delivering the child, but fifteen hours of hard work failed to save the poor woman.

About one hour ago I returned from a 60-mile drive on the ocean beach, with the temperature at 18 degrees above zero. I wonder how that would strike some of those parlor-medics who dread to put on their overcoats for a two-blocks' walk to see a patient? If I were to practise medicine in a city now and write prescriptions in an office, it would seem to me like taking candy away from a little child—easy money, as compared with my present work.

C. Augustus Sutton.

Cape Hatteras, Buxton, N. C.

## THE PULMOTOR—AN APPARATUS TO PRODUCE ARTIFICAL RESPIRATION

Considerable interest has been shown in Chicago, during the last few months, in an appliance recently introduced by the Commonwealth Edison Company, for the resuscitation of persons asphyxiated by gas, rendered unconscious by electrical shocks or apparently drowned. It is now the plan to place one of these instruments at every public bathing beach in Chicago,

during the swimming season. Many lives are now lost because artificial respiration cannot be produced quickly enough. This instrument not only provides artificial respiration, but a supply of oxygen is also furnished to facilitate the restoration of the respiratory functions. The instrument is described as follows:

The pulmotor which the Commonwealth Edison Company has so far sent out is about the size of a large suit-case. In the lower portion of the case is an iron cylinder, 3 1-2 by 21 inches, containing oxygen at a pressure of about 2800 pounds when completely filled. This life-sustaining gas also furnishes the energy which is required to induce breathing, in the following manner:

The oxygen from the tank flows through a reducing valve, which at the outlet side maintains a pressure of about seventy-five pounds, and from there to the controlling valve. Initially the passage to the lungs is open through this controlling valve. The latter connects with rubber tubes leading to a metallic face-cap with a rubber rim which closely fits the patient's face. This face-cap on one side is provided with a rubber bag, which permits a pair of forceps to protrude, by means of which the patient's tongue is held from obstructing the pharynx. The oxygen then has free access to the lungs.

When the pressure in the lungs has reached a certain value (about normal), a bellows interconnected with the lung cavity through the rubber tubes actuates the controlling valve. The pressure of the oxygen is now directed so as to create a suction over the connections which lead to the lungs, thereby causing exhalation of the gases previously forced into the lungs. When a certain vacuum is reached in the lungs and bellows, the outer atmosphere acts on the latter, which in turn operates the controlling valve and again admits the oxygen to the lungs. The frequency of these reversals depends upon the size of the lung cavity, a larger space requiring greater time, while with smaller lung cavities the operation is correspondingly more frequent.

This process is continued until the patient shows signs of natural respiration. The pulmotor action is then discontinued and the patient is allowed to breathe the pure oxygen through another small face-cap connected by a hose directly with the oxygen-tank.

Several patients can be treated at once. An extra tank of oxygen is carried in nearly all calls. This enables the operator to treat two persons at the same time, using the pulmotor on one and giving the other person oxygen from the oxygen bag. The majority of calls have been for more than one person—in several cases for four persons. In the latter cases it was possible to treat them all at practically the same time by having the patients close together and transferring the pulmotor and oxygen-tube from one to the other.

## SOME QUESTIONS TO BE ANSWERED

1. Do the readers of CLINICAL MEDICINE and the editor think Dr. Breakstone's article on gonorrheal urethritis contains the most logical treatment yet offered? What about the formula of the injection, given on page 53?

2. Where can we obtain the douche-point, with soft-rubber cushion, for vaginal use, mentioned on page 64?

3. Would calx iodata, calcium sulphide and arbutin, all combined in a single capsule, be good for the internal treatment of gonorrhea?

4. Would a solution of ichthyol, glycerin and water make a good injection for gonorrheal urethritis?

5. Please tell us all the uses of hypodermic lobelia. Would lobeline be just as good?

6. In giving chloroform we are told that its first effect is to dilate the pupil, and that a larger quantity contracts the pupil; if still more is given after the pupil is contracted the next effect is dilation—which stage means danger and perhaps death. Now, if the hyoscine, morphine and cactin tablet is used before chloroform is given, does it not cause confusion as to the pupillary reaction? I think that it does. It dilates the pupil and renders it more difficult to contract and remain contracted; therefore, when H-M-C is used, the just-cited pupillary action and reaction cannot be trusted as a guide.

7. What is the present-day treatment of urethral stricture? I was taught to cut it, keeping up dilation with sounds.

8. When socalled spasmodic stricture will not yield to treatment should a cut be made, or forcible dilation resorted to?

9. Could we not at times have in place of spasmodic stricture (i. e., spasm causing a stricture) a stricture, the presence of which caused the spasm? If so, should this stricture be cut?

10. I have prescribed chewing gum for the dry mouth of fevers and other conditions—used it before I saw it mentioned in the journals. Please mention all conditions in which its use would do good.

11. Can any of our readers tell me, through CLINICAL MEDICINE, where the Morgan horse can be obtained in the most pure state, i. e., with the most Morgan blood. I should be glad to receive the ad-

dresses of reliable stockmen who have this kind of stock for sale.

Have not other readers found the January, 1912, number of CLINICAL MEDICINE the best one yet? I have, and I have been with the CLINIC ever since the first number came out. Have they (the readers) not found everything claimed for the alkaloids and for hyoscine, morphine and cactin true? I have, and as for H-M-C, "the half has not yet been told." It has given me many nights' rest—and I did not take it myself either. C. W. HUNT.

Brevard, N. C.

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[1. Dr. Breakstone's treatment of gonorrheal urethritis is very conservative, and perhaps errs on the side of too great caution. For a criticism, see Dr. Robinson's article in the March number, page 279, also Dr. Breakstone's reply, page 413, this issue. The formula is discussed in these articles.

2. The douche-point for the vaginal syringe referred to in Dr. Candler's article, on page 64, is obtainable of Chas. Ruckstahl, 514 Elm St., St. Louis. Ask for the Gray Recurrent Irrigator.

3. Better give the remedies separately. Calx iodata and calcium sulphide are incompatible, the latter, in the presence of acids, yielding hydrogen sulphide, which combines with iodine to form hydriodic acid. The calcium sulphide and arbutin are both useful, and in our opinion indicated. The calx iodata does not seem to be so clearly needed. Another useful remedy is formin (hexamethylene tetramine, or urotropin). See Dr. Breakstone's article.

4. Upon theoretic grounds it should be useful, through its depleting action, and by draining and unloading the urethral follicles. Yet glycerin is sometimes quite irritant. What say our readers about this whole injection problem?

5. Read Dr. Ellingwood's paper in the February number, page 154. It contains a wealth of information on this topic. We believe that lobeline would be "just as good"—perhaps better. Fact is, we have one report of splendid success with it, which will be published soon.

6. One of the advantages of using hyoscine-morphine, prior to the general anesthetic, is that it reduces the dosage of chloroform below the danger point. Thus it renders dependence upon the eye-reflex unnecessary, simplifying the giving of the chloroform, which should, of course, be administered slowly, by the drop method. A few drops, a few drams at the most, will suffice. In all forms of narcosis it is just as important to watch heart and respiration as the eye. The respiration is slowed by hyoscine, but if its quality is good, and the pulse also good, there is no immediate danger. In watching the eye the temptation is too great to test the corneal reflexes. Harm is done by clumsy testing with the finger during narcosis.

7. Your queries on this subject have been referred to Dr. W. J. Robinson, who has also answered the next two questions. He says: Strictures are now much less common than they were formerly. This is undoubtedly due to the fact that the local treatment is more systematic and more rational, and at the same time the injections are not so strong or caustic as those used in former days. As to treatment, *the favorite method of treatment of the present day is by sounds or dilators.* Strictures are cut much less frequently than in former days. The invention of the Oberländer-Kollmann dilators permits of their being passed through a stricture of small calibre and then dilatating the stricture gradually.

8. A spasmodic stricture should certainly not be cut. There is no spasmodic stricture which will not yield to dilatation. A hot sitz bath, the instillation of a few drops of warmed oil into the urethra, or some local anesthetic with adrenalin, will make many a stricture passable which seemed impassable before.

9. The next question is somewhat obscure. It is not a spasm that causes the *stricture.* A spasm merely causes a temporary narrowing of the canal, and if it is a stricture it is a stricture without the spasm. Of course it may be a combination of both organic and spasmodic stricture. Only strictures which are *impassable to a filiform* (but such are mighty rare, because many a stricture which will be

declared impassable by some doctor will prove quite passable in skilful hands) needs an operation, and of course in such cases only external urethrotomy can be considered.

10. It is quite an undertaking to mention all the conditions in which chewing gum *might* do good. Beside the dry mouth and the apathy of serious febrile diseases, chewing gum has been seriously recommended as an aid to digestion, especially in cases of starch indigestion. Perhaps our readers can suggest other uses.

11. We are glad that Dr. Hunt asked about the Morgan horse. The automobile will never become so popular as to displace the horse entirely in the affections of the doctor, and the Morgan is the ideal doctor's animal. The writer recalls a little Morgan mare he had in the early days of his practice. She was tough, wiry, loved work, yet was of a kind and tractable disposition. Ah, those were busy days for both of us! Dr. Campbell, editor of *The American Journal of Veterinary Medicine*, tells me that the Government is doing some splendid work in Morgan breeding, in order to secure mounts for the U. S. Army. A letter to Dr. A. D. Melvin, chief of the U. S. Bureau of Animal Industry, brought the following list of persons interested in the breeding of pure-bred Morgans. We give it for other readers who may be studying "the doctor's horse." Here is the list: C. P. Crane, St. Charles, Illinois; C. F. Dewey, Amboy, Illinois; A. R. Van Tassel, Du Bois, Pennsylvania; C. C. Stillman, 165 Broadway, New York City; H. R. C. Watson, Brandon, Vermont; Col. Joseph Battell, Middlebury, Vermont; E. A. Darling, East Burke, Vermont.

Dandy compliment you gave us, Doctor. We like it—and you. Call again.—Ed.]

## COLCHICINE FOR ACUTE RHEUMATISM AND ARTHRITIS

Some years ago I came across the statement, in Goodno's "Theory and Practice," that colchicine (the alkaloid of colchicum) was a very valuable remedy in rheumatic fever or inflammatory rheumatism. Dr. Goodno gave it as his opinion that it was most effective in the long standing and subacute cases, among young patients. As the doctor advanced the opinion that inflammatory rheumatism, if vigorously and efficiently treated, need not run as long as it is usually allowed to do, in fact could often be thoroughly broken up within a week, I naturally read his directions for treatment with a high degree of interest.

I applied to the local druggist for a supply of the remedy, but he did not have it, in fact he had never heard of it, but said he would get for me if procurable in the country. He could not get it in Cleveland, and finally had to send to New York for it. I found it fully up to Dr. Goodno's recommendation as a rheumatism remedy, giving very definite and positive results. It is a very powerful alkaloid and must be used in very small doses.

Dr. Goodno considers it as much of a specific for acute rheumatism as quinine is for malaria, and, from my experience, I fully agree with him. When using it at first, I had one grain of colchicine to the ounce dissolved in alcohol and of this solution I dispensed 40 to 90 drops in each 4-ounce prescription. When the dosage is pushed it will begin to produce its physiological effects, i. e., frequent loose movements of the bowels with colicky pains. I think that it can now be procured in the form of granules, 1-128 grain each.

Within the last two months I have had a grand result from colchicine in a very different sort of affection. About three months ago a gentleman about 55 years old, and very stout and hearty, came to me to see if I could relieve him of what he called "rheumatism" of the knees, of twenty years' standing. I differed with him as to the diagnosis, considering his trouble to be really arthritis, but I did not tell him so, yet encouraged him as much as I could. He had suffered many things, at the hands of many doctors, and *more* and *worse* at the hands of the officiating genii at a celebrated health resort, who only gave him relief for the time being.

Well, I went at him with all my vegetable rheumatism remedies, and salicylate of sodium also, but with very little effect.

After a time, as I was getting very little result, I changed right around and put him on colchicine and iodide of potassium, with immediate and marked improvement. He says he can now walk as well as any man, and is going to drive every one he can hear of with rheumatism to me to be cured. The improvement must be credited to the colchicine, as he had formerly taken heavy dosage of iodides without improvement.

WM. M. GREGORY.

Berea, O.

## THE RESIGNATION OF DR. WILEY

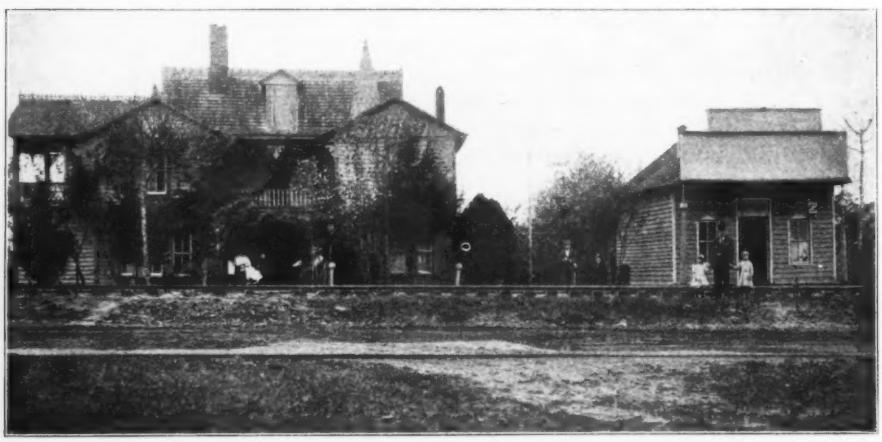
Just as this last form of CLINICAL MEDICINE is being shaped up for the press we read in the newspapers that Dr. Harvey W. Wiley, so well known as chief of the Bureau of Chemistry of the United States Department of Agriculture, has resigned. Dr. Wiley has held this position for twenty-nine years. It has been his life work.

The last few years of his incumbency have been very stirring ones. They have seen the development of legislation which culminated in the Pure Food and Drugs Act of 1906, and other sanitary laws.

In securing this legislation, and particularly in its interpretation and enforcement, Dr. Wiley has been the central figure. Even his enemies—and like all determined men of positive ideas the Doctor has his full quota—must admit that to him is largely due the crystallization into laws of the demand for honesty in this direction. And, furthermore, without his insistent personality behind it, these laws would to a large extent have failed of their purpose.

Dr. Wiley is an interesting figure. Physically he is a big man, carrying his sixty-odd years like a boy. Temperamentally good-humored, dropping naturally into epigrams of action as well as speech, interspersing his remarks with jokes and stories almost like Lincoln, he is a mine of good "copy" which the newspaper men have been quick to appreciate and work. This accounts in part for the wide publicity which has been given his work and for his remarkable popularity with the masses.

The Doctor was made famous by his now celebrated benzoate of soda decision. Believing that the use of this chemical in any quantity, as a food preservative, was inimical to health, he therefore conducted a series of experiments on a "poison squad"—as the newspapers called the group of young men who submitted themselves to the diet of preserved (and unpreserved) food provided for them.



Home and office of Dr. G. E. Flowers, Granite Falls, N. C.

Though, these results convinced Dr. Wiley of the harmfulness of this chemical, they failed to convince others (some of whom were financially interested) and the whole question was then referred for review to a referee board of distinguished chemists, by President Roosevelt, this board reversing the Wiley findings. It was a bitter fight, and the smoke of the battle has not yet cleared away—nor it it likely to do so very soon. This fight, however, served one useful purpose—it made Dr. Wiley famous, and the public has never lost sight of him since then.

Probably no one, not even his intimate friends, will deny that Dr. Wiley has made mistakes. We can forgive him for that—for who makes no mistakes makes nothing else. We are even heretical enough to doubt the infallibility of his benzoate-of-soda decision. We think the test of time must convince the absolutely unbiased thinker that his contentions were "not proven." But one thing we do not doubt—the personal honesty of the man, and his intellectual bigness. He believed he was right, and he was ready to fight for his convictions. We need such men, and we are sorry when any of this kind are lost to the public service.

It is said that Dr. Wiley is to take an editorial position with *Good Housekeeping*. The fact that this magazine is the property of William R. Hearst may, or may not, be significant. The doctor wields a trenchant pen; he will be listened to; and in his editorial chair (should he assume it) it will still be possible for him to be a sharp thorn in the sides of his opponents.

When we heard of his resignation it occurred to us that he might take the important position, recently resigned by Dr. McCormack (to take effect at the next general meeting), lecturer and organizer for the American Medical Association, carrying his fight for a national department of health to the people. Perhaps he may do this. Who knows? It's a big job, a great opportunity for good work, and here's our bet, with the assurance of our support, that he gets it (if he wants it) and (if he takes it) will fill it well. Anyhow, we wish him health, long life, happiness, and success in his new work, whatever that may be.

## PNEUMONIA CAN BE ABORTED AND CURED

Dr. Abbott's article in the last number of *Helpful Hints*, entitled "Pneumonia and Tuberculosis", is of special interest to me. I have a particular liking for the doctor who knows, and *knows* he knows, that he can cure pneumonia. The modern theory that pneumonia is a self-limited infectious disease and incapable of being cut short or cured is at variance with the facts. This theory is controverted by the experience and testimony of thousands of intelligent, honest and faithful physicians, both dead and alive, and I cannot resist the temptation of taking a shot at it at every favorable opportunity.

I have now been in the active practice of medicine more than fifty-two years—two years near Cairo, Illinois, two years in the United States Army, during the great civil war, the rest of the time here in Lincoln, Illinois.

I have certainly enjoyed an average amount of general practice, and my record of deaths, since the State Board of Health has required us to report these, shows that I have not lost on an average one case of pneumonia in five years. I do not believe I have lost twenty pneumonia patients in my fifty-two years of practice. This statement includes infantile as well as adult cases of the disease.

Pneumonia was very prevalent and fatal when I practised near Cairo, but I fully and honestly believe the above statement to be strictly true. At that time the temperature was reduced to normal in a few hours by inducing copious perspiration and by free opening of all the secreting and excreting glands and organs of the body, while the temperature was kept down by appropriate doses of veratrum.

My methods have changed somewhat, but the same general principles are followed up to the present time. I treat infantile pneumonia with aconite and veratrum, one or both, and ipecac, all combined and in small doses, frequently repeated. I no

more expect a child to die from pneumonia under my treatment than from malaria.

Some microscopic-laboratory doctor is liable to get the floor at this point and say I do not properly diagnose my cases. He might as well say that an old-fashioned Methodist circuit rider does not know chicken at sight, dead or alive, as to say I do not know pneumonia when I see it.

Away with the assertion of one of the most popular, modern authors on the practice of medicine, that pneumonia is a self-limited disease, which cannot be averted or cut short by any known means; and of another, who asserts that the fever is a fire which is burning out the cause of the disease, and is a good thing. To me it would be just as sensible to tell a man whose house is on fire, that the fire is a good thing, that it will most certainly kill all the microbes, insects and rodents in his house, as to tell him when his wife has pneumonia that the fever is a good thing, that it is burning up the micrococcus lanceolatus or the pneumococcus.

This may be all right in theory, but all the same when the fires have both completed their work, the poor man will have neither house nor wife.

In conclusion I submit the report of a case, as evidence that pneumonia may be aborted:

I was called, January 7, to see Mrs. C., age 62, a woman in good health the day before. During the night she had a chill of several hours' duration, followed by fever. When I saw her, during the forenoon of the next day, her pulse was 120, temperature 102° F. and respiration 30. Great difficulty of breathing in the recumbent position. There were frequent paroxysms of coughing and a copious expectoration of about the most tenacious, sticky mucus I ever saw. Face was flushed and dark, with an anxious expression, indicating a lack of breath.

The right lung gave all the physical symptoms of the congestive stage of pneumonia. I gave her a hypodermic of lobelia, and within one-half hour her symptoms were all ameliorated. Breathing not so difficult; pulse not so bounding and tense; blood pressure not so great; and expression of face less anxious. The circulation of her blood was speedily equalized, the capillaries of her body all flushed, elimination becoming active from every gland and pore of her body. The fever left her within a few hours.

She was given veratrum enough to keep her pulse down to 80, and the next day she was convalescent. And practically well in two or three more.

That is what I call aborting pneumonia.

W. W. HOUSER.

Lincoln, Ill.

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[The jumping from correct premises to incorrect conclusions is well shown by the men who, having found that fever "kills the bugs," claim that fever is only a friend. Dr. Houser's simile is as apt as his treatment is scientific. He opens the gates and lets out the toxins; fever falls, and as it does, the patient is better. He is in accord with modern science, pathology, and bacteriology. He could do better work with better tools, like aconitine and veratrine, but he does very good work as it is.—ED.]

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## THE TREATMENT OF LOBAR PNEUMONIA—IN VERSE

Pneumonia is a dread disease, as every one must know,
"The Captain of the Men of Death, 'tis called by Doctor O,
And for its treatment men have tried of remedies a score,
And ere the one supreme is found we'll try that many more.

As Osler says in his review: "Without a dose or pill
The sick man convalesces soon, scarce knowing he was ill."
Such nihilistic views as these are practised to this day;
Self-limited the ailment is—that's what some doctors say.

Then, on the other hand, we find enthusiasts galore,
Who say, "Here medicine is good;" so they give more and more.
And other measures not a few they practise with a vim,
Then if the patient lives it through, they point with pride at him.

For me to rehash o'er again the many measures used
Would only occupy the time, and you might feel abused,
So I will only mention here some measures that are found
To be of use in keeping those quite sick above the ground.

One man from Indiana says, that all we need to do
Is fill pneumonics full of lime—just soak'em through and through;
The calcium salts, he claims, must be the pneumococcus' foe;
So when the patient gets well filled, the pneumo bugs must go.

He says that by this method he has been successful—very;
For only six percent of his have gone across the ferry:
He also says that other measures, too, are very bad indeed—
That lime and only lime, alone, is what the pneumos need.

Another recent writer says: "Lobelia is the stuff.
Abort the pneumo while you can by giving 'dose enough.'
Relax the patient through and through, perspire him just a little
And he'll soon cough the bugs all up, and discharge 'em with his spittle.

"The dose to do this is five drops, repeat in half an hour;
Increase the dose each little while, and soon it's in your power
To bid your patient speed along, and go to work next week;
And if the thing should come again, your services to seek."

Another writer says quinine, the sulphate, by itself,
In most heroic doses puts pneumonia on the shelf;
If given early in the case, the dose a dram or more,
The doctor takes his rest in peace—nor worries as of yore.

Such dosage keeps the fever down, nor causes much alarm,
By lysis now it terminates without a bit of harm.
Some think tinnitus here would be a symptom hard to stay
But in my brief experience it has scarcely come our way.

You understand, with all of these, are measures tried and true
Which we should all be free to use, to pull the patient through,
Such as fresh air, a goodly lot, and physic when there's need;
To keep the primæ viæ clean is quite a help indeed.

The alkaloidal method too, is getting quite a test,
And men who used it freely, say that it's the very best.
Aconitine, veratrine, digitalin, small—and fast,
Until the pulse is eighty, Keep it there until the last.

But, also, do not once forget cathartics good and strong;
Enough to clean the bowels out will not go very wrong.
And keep them clean by using sulphocarbolates combined.
(The sodium, zinc and calcium work together well I find.)

To keep the heart supported strychnine arsenate here is used,
And cactin, for its wavering, by some is not refused.
A cotton jacket now should come to cover up the chest;
A quilted one, well greased inside, is said to be the best.

But first rub on some guaiacol, ten drops upon the spot
Where seems the most congestion; it may be a little hot.
Now leave on triple arsenates and nuclein combined,
And your percent of cures will not be very far behind.

Another recent writer says that water is the thing we need;
Apply it hot, apply it cold—cure the patient of his greed
For liquid goods of any sort, no matter what his taste may be,
For by this hydropathic plan his taste for booze must flee.

He puts hot water to his feet, and cold upon his head;
A compress damp around his chest, by rolling him in bed.
This linen compress should be used at sixty, Fahrenheit,
Well covered with a flannel, thin, and changed both day and night.

If fever runs a little high, some ice bags here and there,
Or water from the nearby spring, will hold it very fair.
Or mustard foot-baths, for an hour, the temperature will lower,
But if it does not yield right soon add mustard, more and more.

And so we have for treatments of this malady severe,
A goodly lot of agents some of which I've mentioned here.
Now just one more, and I am through with calling to your mind
A lot of simple, useful things that anyone may find.

This one is scientific; it is treatment "on the square,"
And those who've used the method, shout its praises through the air.
It is the vaccine treatment. With the diagnosis right
Inject some thirty million deceased cocci at first sight.

Then take autogenous vaccine from germs in sputum found,
And you'll be happy when you see success your work has crowned.
The dose of these killed germs must be fully twenty millions strong,
And fifty millions may be used if things are going wrong.

Repeat the dose, once, twice or thrice, if symptoms don't abate,
In hours here indicated—twenty-four to forty-eight.
Now add some stimulation if the symptoms show the need,
And with the ease they're carried through you'll be surprised indeed.

And now kind friends I thank you for attention here tonight
And fondly hope the pneumo bugs may keep far from your sight.
And should I ever try again to be the muse's slave
It's pretty certain Doctor Holmes would turn twice in his grave.

GEORGE T. BOYD.

Palouse, Wash.

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[Doctor, this is a maraschino! You'll have to undertake the preparation of a "practice of medicine" in verse. Come out good and strong on the active-principles and we'll urge the boys in the colleges to learn to sing it! Coming right down to brass tacks, the alkaloidal method has received the test of experience, and has made good in thousands of cases. The other methods, even that depending on the use of bacterins (in which, by the way, we have considerable hope and some confidence), are still in the hypothetical stage. Anyhow, tackle that "practice"!

The Doctor's "pome" was read at a meeting of The Whitman County Medical Society, in Palouse, Washington, on February 19, 1912. It made a hit—of course. —ED.]

## CARBOLIC INJECTIONS IN TETANUS

I read the article on Lobelia in the February number of CLINICAL MEDICINE, and also submitted it to the medical brethren, none of whom can really believe that Dr. Ellingwood really meant that prescription on page 156 to mean what it says, for all say that 20 drops of carbolic acid would kill. We look for correction in the next issue.

W. H. G. GRIFFITH.

Trenton, N. J.

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[We wrote Dr. Griffith that in our opinion Dr. Ellingwood meant exactly what he said. Baccelli, who introduced the carbolic-acid treatment for tetanus, showed that during the disease the patient acquires an enormous tolerance for phenol. Cases have been reported in which from 100 to 300 grains of carbolic acid have been administered daily. However, we referred the matter to Dr. Ellingwood, who replied as follows:

"It is now an established fact among observers that the tolerance of the system to phenol (carbolic acid), given hypodermically, when the system is loaded with toxins, is out of proportion to its action in health, and this is not explained by our knowledge of its influence when given by the mouth. A theorist would say, also, that it would coagulate the albumins in the fluids of the body, upon contact, from hypodermic use. Baccelli's original observations, confirmed by many Italian and other writers, have established the fact that the tolerance of the system to its action may be very great and that coagulation does not occur.

"Dr. W. B. Matthew, of Blue Mound, Illinois—a very reliable observer—has cured twelve consecutive cases of fully determined tetanus, largely among farmers, by injecting 20 minims of each of 95-percent carbolic acid, glycerin, and fluid gelsemium, repeating the injection every four, six or eight hours as needed, and has seen no deleterious influence from the phenol in any case. He now believes that the peculiar influence of hypodermic lobelia will only add to the efficiency of the above treatment."

Dr. Ellingwood does not state in what dilution the carbolic acid should be given, but Baccelli used to administer it in 1-percent solution. Doubtless it may be given much stronger without causing coagulation of the tissues. We should like to know just how Dr. Matthew used it.—ED.]

## THE NATIONAL COLLEGE OF ELECTROTHERAPEUTICS

The interest in electrotherapeutics is increasing, and it is rapidly being placed on a more scientific basis. The time has come when every progressive physician should be familiar with this field. Realizing its importance, we have persuaded Dr. H. C. Bennett, of the National College of Electrotherapeutics, to contribute a series of papers on this subject, the first of the bunch appearing in this number. The doctor who reads these articles carefully will have a very good idea of the principles and the general methods em-

ployed by the electrotherapeutist; but we hope few will stop there. The National College provides a correspondence course which is within the reach of every doctor, and in which the work is complete, thorough and so clearly stated as to be readily grasped. By all means investigate this course. Address Dr. H. C. Bennett, National College of Electrotherapeutics, Lima, Ohio.

## CONSULTANTS AND FEE SPLITTING

I have read Dr. Bowles's article, "Referred Patients," in your March number. There is much of truth in it. The whole question of fee-splitting is very simple. Our trouble arises from the fact that we have gone at the matter in the wrong way. We have allowed ourselves to adopt the layman's view of the relative importance of the physician and surgeon. Because the latter's work is spectacular and his patient is either immediately benefited—or dies—he has been set upon a pedestal, as it were, although his skill is not nearly so great as that of the physician who carries his patient safely through a severe illness. Any man with the usual medical education and a little mechanical ability—and achance to use it—can become a good surgeon.

What we need to do is to readjust our relations. The attending physician alone should deal with the patient. The surgeon really is only a consultant. When I decide that my patient needs an operation, I should call in the surgeon. When he has made his examination and we have agreed as to what should be done, let him name his fee to *me*, not to the patient or the family. The patient has nothing to do with the surgeon; he is my assistant. When he and I have agreed upon the amount of his fee, it is my duty to make the charge to the patient and collect the bill, paying the surgeon his fee out of my charge. This is the solution of the problem, and it is right, just and ethical.

T. F. SPINK.

Washington, Ind.

[This fee-splitting problem does not seem to us quite as simple as Dr. Spink makes it. The number of papers which have been and are being written on the subject, and the intensity of the discussions, which break out at almost every society meeting, show that neither physician nor surgeon is satisfied. Unfortunately, most of the "discussing" thus far has been done by the surgeons. The general practitioner has hardly been heard from at all, although he has generally been accused of being the ever-hungry leech who has sucked the financial blood from the poor, tempted, down-trodden surgeon. Said general practitioner is alleged to be out for the money exclusively, and therefore accustomed to refer his surgical cases to the surgeon offering the largest commissions, irrespective of the latter's ability and skill.

Now, without going deeply into the problem, which has been discussed with great care by Dr. Bowles in the paper concluded in this issue, it seems to us that the following points should be taken into consideration.

1. Fee splitting is the natural result of the enormous disparity between the fees paid to physicians and to surgeons and other specialists. The general practitioner as a rule is poorly paid; in spite of the rapid increase in the cost of living during recent years his rate of charges has remained stationary, and the result is that his average condition is one of comparative (often actual) poverty. The surgeon, on the contrary, receives a compensation which is relatively high. The charge for a single operation, even by a surgeon of mediocre ability, is often more than a month's—even a year's—earnings of a general practitioner of equal ability. With the growth of medical specialism there has been an increase in the rate of the charges of the specialist. This has resulted in a rush of general men into the ranks of specialism, and a naturally more intense competition between surgeons and others, for this profitable business.

2. Fee splitting being the natural result of an economic condition, due to a disparity in the relative fees of internist and surgeon, it is bound to persist until this disparity is removed. In economics, as everywhere else, "water will seek its level."

Just how to adjust the rate of remuneration between the two classes of medical men is *the* great problem. The fee-splitting problem will not be settled 'till this readjustment is settled.

3. There is nothing really essentially wrong about fee-splitting, *so long as the interests of the patient are placed paramount to all other interests, and so long as the "commission" paid the internist is proportionate to the actual service of the latter to the patient.* When it exceeds that it becomes "graft."

4. The first step in the settlement of the whole problem is publicity. We have no right to ask the patient to "buy a pig in a poke." He should be placed in a position to make an intelligent choice between different surgical consultants, should be under moral compulsion to protect the legitimate interests of his family physician, and should understand how much he is to pay, and to whom.

Dr. Spink's suggestion, in this connection, is an interesting one, and would, we believe, go far toward bringing about such a readjustment, on the basis of publicity. The family physician, who knows more about the patient than anyone else, should be master of the situation. When every community has its own hospital, and the surgeon is employed as a consultant only, the settlement of the problem will be easier.—ED.]

## THE TREATMENT OF TRACHOMA

Trachoma cases are frequently difficult to handle satisfactorily. The patient is generally a school child, whose mother comes to the family doctor with the health examiner's blank and a protest that "there's nothing the matter with Willie's eyes."

Treatment is accepted, however, in order to secure a statement from the doctor that will allow the child to attend school, and, at times, this statement and the first two or three treatments end the matter.

The Health Department of New York City has no provision for following up these cases, and the certificate that the case has begun treatment frequently covers a prolonged period of nontreatment.

Treatment is abandoned because the parent cannot conceive that the trouble amounts to anything—because it involves an expense that frequently falls on people who cannot afford it, and because the patient finds it painful.

Having had and seen unsatisfactory results from the old methods of treatment, either with the Knapp forceps, with or without other applications, or with bluestone (copper sulphate), and mercury ointment, I tried zinc chloride, with cures in all cases.

My theory was that zinc chloride is a caustic to all diseased tissues, but not to normal tissue, and this theory has not been disproven in my experience under some rather severe tests.

From a stock bottle of a 50-percent solution of zinc chloride I take one drop, adding it to 100 drops of water. This, in a two-dram vial, will last the patient about a month, and it is easy to get him to return once a month for inspection. With a medicine dropper, the parent drops a drop in each eye twice a day. In all the cases I have been able to follow up, the cure has been perfect in a few months.

More or less smarting results, which is quickly allayed by application of a cold wet cloth to the eyelids, but this smarting does not compare with the bluestone effect.

"C."

Brooklyn, N. Y.

## ANOTHER CASE OF SUPERFECUNDATION

In the January number of CLINICAL MEDICINE, under the caption of "Superfecundation," you quote an article from the *Philadelphia Ledger*, "describing the twin babies born of supposed-to-be full-blooded negro parents. One of these babies is a typical daughter of Ham, the other as white as any Caucasian, with white, straight hair, blue eyes, pink nails, aquiline nose," etc.

Now, there is nothing new nor strange about this case. The writer had a similar one, once upon a time. The husband and

wife were colored, and the mother had previously borne children true to color and nature, but in this instance (both children being girls) one of the offspring was as black as the ace of spades, with black eyes and black, kinky hair, and the other was white, with light-colored hair and blue eyes. The birth of the white one preceded that of the black one just fifteen minutes.

Subsequent investigation by me developed the fact—as related to me by an old granny neighbor—that the mother of the children "uster hab a white gemman visitor, an he mus' hab skeered de woman and marked dat chile."

Quite probable?

JUNIUS, M. D.

——, Connecticut.

### A CASE OF SUPERFECUNDATION

Referring to the brief article in the January number of CLINICAL MEDICINE, quoting the *Philadelphia Ledger's* report of the twin babies, one black and the other white, I can say that I saw a similar case, years ago, in Stewart County, Georgia.

In this instance the mother was a typical daughter of Ham, a full-blooded negro woman. She gave birth to a similar pair of twins—one black and the other white. A searching inquiry revealed the fact that after her husband (a full-blooded negro man) had coitus with her he left the room. A few minutes later the white overseer entered the room and she submitted to his embraces. All parties referred to (including the twins) are living to-day, and none of the principals has denied the facts.

J. C. CHRISTIAN.

Local, Ala.

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[These cases have a passing interest, but since our only information in the Philadelphia case is a newspaper report, it must be accepted "with a grain of salt." Of course the usual explanation in these instances is that given by our correspondents, but it is not safe to accept as a fact the natural assumption of double paternity. Recent studies in heredity, as applied to skin pigment, conducted by Dr. Charles B. Davenport of the Carnegie Institution, have shown that there may be great variation in the color of the offspring of colored people, especially if the parents are mulattoes. In a recent letter Dr. Davenport says, regarding such a case: "There is no reason why one of a pair of twins (full sibs) should not vary greatly in skin color; one being white and one dark brown." We must not feel too sure as to the color-origin in such cases.

Dr. Benjamin Frankson, of Rugby, North Dakota, quite properly suggests, also, that we should not be too sure about the ultimate color of a newly born negro baby. When first born the babe is pretty white (or rather red) anyhow, not varying greatly in that respect from white infants. Coloration develops soon, and is quite noticeable in the second or third week.—ED.]

### NEWS NOTES

THE Mississippi Legislature has passed a bill to raise the standard of requirements for admission to the practice of medicine in that state. This bill requires more advanced preliminary qualifications, and a diploma from a recognized medical college. It has passed both houses and presumably will receive the assent of the governor.

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SIR FREDERICK TREVES, the famous English surgeon, who is now in this country, stated in an interview that what impressed him most upon this side of the ocean was not the wealth and splendor of the nation's metropolis, or the wonders of Niagara, or any of the other things he has seen about New York and Washington, but the wonderful triumph of American medical science upon the Panama canal zone.

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ONCE in a while we mention an advertising booklet or other piece of commercial literature in these pages. A particularly good one, filled with information vital to the physician, is "Why Digitalis Fails." This is published by The Hoffman-La-Roche Chemical Works and it is more than worth the postcard necessary to

procure a copy, since it contains a large amount of very interesting information concerning the action of digitalis and the conditions under which it may properly and advantageously be used.

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HERE is a chance for our poets: The editor of *The Lyric Year*, published in New York City, announces that through the generosity of a lover of poetry, who wishes to remain anonymous, three prizes will be offered for the best original poem. The first prize is one of $500, and there are two second prizes of $250 each. The contributions may not exceed three hundred lines in length and only poems are eligible which have not appeared in book form or have not been printed in magazines prior to January, 1912. This is a good opportunity for our literary doctor friends (of whom there are many in the "family") to "cash in" on the muse.

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PROF. STUVER has assumed control of the Fort Collins Sanitarium, at Fort Collins, Colorado. The maladies to which special attention is given here are rheumatism, gastric and hepatic affections, nervousness, diseases of women, yenereal, and cases of alcoholic and drug addiction. In addition, diseases of old age are taken up as a specialty of specialties. Fort Collins is a delightful mountain resort, with pure water, no saloons, a fine sanitarium, reasonable charges, and Dr. Stuver. What more could one ask! Surely if one has arrived at that age when the prolongation of life becomes a prominent and most desirable object, where could it be secured better than at this beautiful place and delightful climate, and under such care!

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DR. TOM A. WILLIAMS writes us from Washington, D. C., that the Medical Society of the District of Columbia has appointed a committee on "Public Instruction in Medical Matters," of which he is chairman. This was, in a sense, an outgrowth of the ideas conveyed in the Doctor's article on "Medical Education and Quackery," printed some months ago in CLINICAL MEDICINE. The purpose of this committee is to publish weekly bulletins and organize public lectures regarding the prevention of disease, and concerning personal hygiene. It will not interfere with the campaign for public hygiene, already under the charge of the health board. This idea has been developed elsewhere—we have the public lectures for laymen here in Chicago—and may well be tried in all communities, big and little. The best way to combat quackery is to let the people know what the legitimate medical profession is doing for them.

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"WITH its January number THE AMERICAN JOURNAL OF CLINICAL MEDICINE enters upon its nineteenth year. On its birthday, its past and its future we would extend congratulations. The scope of CLINICAL MEDICINE has been so extended since we first made its acquaintance, away back better than eighteen years ago, that one would hardly recognize it in its present as the grown-up of that sturdy infant. Yet there is nothing in its present inconsistent with its past. It has always stood for light and advancement in the profession, it is an energetic exponent of all which concerns the progress of the profession and exerts as wide an influence as is known among medical publications. A prosperous and useful 1912 to you, Brother Abbott." This is the nice "hand out" given us by *The Medical Fortnightly*, our splendid St. Louis brother. By the way, are *you* acquainted with *The Fortnightly*, Doctor? Get a copy and see what an excellent magazine it is.

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WHAT shall I say to the boy? That is a question that comes to every father, and it is a hard one to answer. Only yesterday I replied to a letter from a doctor, who wanted help. The physician is the one to whom parents generally come for advice, and it would simplify matters a good deal if he could recommend a book which would give the whole truth in a readable as well as a chaste form, and without being namby-pamby or commonplace—a book that the boy's father could read, and that might safely be placed in the hands of young men. At last there is such a book, written by a master of the

subject—Dr. G. Frank Lydston. His "Sex Hygiene" has only just been published, and is therefore right up to the minute. In force, virility, scientific accuracy and literary power it stands in a class by itself. Next month we shall have a careful, sympathetic review, written by Dr. George F. Butler, but we advise you to get your copy at once. Price $2.25. Address The Riverton Press, 628 S. Clark St., Chicago.

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A LARGE section of the state of Texas and parts of Oklahoma and Arkansas have been visited by an epidemic of cerebrospinal meningitis. The Texas papers are full of reports about it. In Dallas alone there have been ninety-two cases, with twenty-five deaths. In Waco 105 cases have been reported, with a mortality of about 40 percent. Many other cities and towns have suffered in the same proportion. Good results have followed the employment of the serum treatment introduced by the Rockefeller Institute. In the cases where the serum has been employed, there have not been the serious sequels so often left behind in epidemics of this disease. In Dallas, it is said, fully half of the deaths occurred within twenty-four hours after the patients were admitted to the hospital.

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WE are much grieved to report the death, on March 16, of our old and dear friend, Dr. James R. Phelps, of Dorchester, Massachusetts, who for many years has been a valued contributor to this journal. His last paper, on "Euthanasia," appeared in the February number of CLINICAL MEDICINE, although it did not carry his name, since he preferred in this instance to remain incog. Dr. Phelps was a brilliant man, temperamentally a mystic, always profoundly interested in everything which concerned the welfare of the medical profession. He was one of our most interesting correspondents, being a student of the literature of the past, especially of the old-time medical and moral philosophies, which, in days gone by, have so profoundly influenced human thought. Jacob Boehme, Nicholas Culpeper, and other of the world's great dreamers, were friends of his, and the Bible was an open book, which had a far deeper meaning to him than to most men, because he read himself into it, until he was saturated with its mystic significance. After he reached middle-manhood he studied Hebrew that he might understand it better, penetrate more deeply into its spirit. There were special ties of friendship between him and our own dear Dr. Epstein, and these two noble men thought alike in many things. Dr. Phelps was, I think, about seventy-five years of age at the time of his death.

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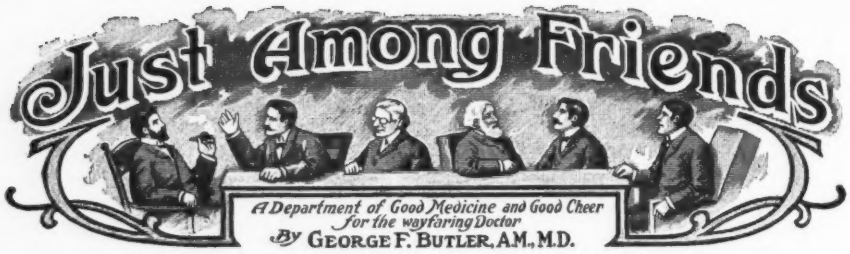
ONE of the greatest difficulties for the doctor who desires to settle in another state, after some years of practice, is to pass the state board examination. In nine cases out of ten he has become so rusty in the technical branches of medicine that he knows perfectly well that he cannot make a good showing. We have had hundreds of inquiries from readers who wanted to know how best to prepare themselves. We are now in a position to give them the practical help they need. Dr. R. G. Schroth, of Chicago, has undoubtedly had more experience in preparing physicians for these examinations than any other man in the United States. Not only does he conduct large "quiz classes" here in Chicago (thus personally training hundreds of persons annually), but he also has prepared a manuscript course of instruction, which may be taken by mail. This work is so carefully done, the instruction laid out in such a way as to reduce it to an orderly *system* of memorizing and emphasizing the fundamentals, that any intelligent doctor who goes through the course conscientiously can be practically assured of success in his examination. The work is of equal value to those preparing for Army, Navy, Civil Service or hospital interne examinations, or for undergraduates in medical schools getting ready for their finals. Dr. Schroth is one of our warmest friends, and because he wants to help the "family" he has made an offer to us which we are authorized to pass along to you. This offer is of his quiz course at a very remarkable reduction, *to subscribers of* CLINICAL MEDICINE *only*. Write us direct, and we'll tell you all about it.




MERCURY in all its forms and preparations has been in use in hepatic disease for centuries. Bad and disastrous as are the consequences of the abuse of this powerful remedy, marked temporary benefit often followed its administration when given in liver derangements; so, from the difficulty of distinguishing the different diseases of the liver, the consequent indiscriminate use of the drug led to great evil. This medicine was at one time given (especially in England) almost indiscriminately and often long persevered in, for disorders of digestion, many of which did not at all depend on the fault of the liver, but on local disease of the stomach or intestines, or on faulty assimilation, the result of debility, which the prolonged use of the mercury only too often increased. Mercury and allied purgatives produce bilious stools by irritating the upper part of the bowel and sweeping on the bile before there is time for reabsorption. The fact of mercury standing at the bottom of the scale of our cholagogs is accounted for by its exceeding other cholagogs in this property; for, of course, the larger the quantity of bile that is swept out, the less is reabsorbed.

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When the kidneys are extensively diseased, a marked intolerance for mercury often is manifested, and, like opium, it must then be given with much caution. A broad rule may be struck to this effect: When there is atony and anemia, mercury is contraindicated; when, however, there is fair power, without anemia, it may be given—always bearing in mind that broad rules do not apply in every case, and when individual experience has demonstrated that mercury does not agree with a patient, it should scrupulously be avoided. The old-fashioned plan of six or eight grains of calomel for acute indigestion may suit some strong persons, but it is within my own personal experience—not of my own prescribing, it is almost needless to say—that such reckless practice has done much harm to delicate patients. Mercury is one of those edged tools which must be handled with care and judgment.

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When to give a dose of mercury in conditions of lithiasis and albuminuria, when it will do good and when to avoid it, is a problem in each case to be solved which will tax the natural powers and acquired skill of the doctor to the utmost. In these cases it is better to give small doses of calomel in conjunction with podophyllin and bilein.

In cases of albuminuria, toward the decline of the affection, when only small quantities of albumin remain, mercury in limited doses usually leads to the entire disappearance of the albumin. It is a remedy, however, which should be resorted to cautiously. While quite a safe measure in the hands of some physicians, it may be a dangerous one when employed by others. So in special cases of albuminuria not consequent upon acute fever a little mercurial may be beneficial, but in every instance it should not be given until the case has been made the subject of patient thought; given carelessly, deplorable results may follow. A tense pulse is usually a fair indication for it. The whole subject is one on which we all desire more precise information.

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But why talk on mercury and disease on such a beautiful spring day as this? 'Tis better to talk of Venus. This is the time of the year we think of Eros and of Aphrodite.

"Uncle Allen," former president of Rush College, used to say that many a man has had to spend three years with Mercury because of having spent three hours with Venus. We know that this is true; yet, when the sap begins to flow in the trees and the buds swell, when the insects awake and the birds come out—the angels of the spring—calling for their mates, we too look for mates, or at least the rejuvenating influence of spring affects us and we go forth to make new demands on life.

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Every spring I feel as Thoreau did when he wrote: "May I dare as I have never done. May I persevere as I have never done. May I purify myself anew as with fire and water, soul and body. May my melody not be wanting to the season. May I gird myself to be a hunter of the beautiful, that naught escape me. May I attain to a youth never attained. I am eager to report the glory of the universe. May I be through with regarding human values so as not to be distracted from regarding divine values."

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As I walked through the woods today, skirting the lake shore, spring seemed easily victorious amid the low bushes, capturing the rough branches of the elms one by one, and the distant slopes to the west, gray like a piece of faded tapestry. I felt inexpressibly soothed and comforted by that hour with nature. The sense of oneness with the woods never filled me more powerfully, and every shifting shadow and delicate note of wood bird seemed to whisper to me: "Come, here is thy home; or, if you like, wander on alone, but, remember, we shall have thee at last, and we will be more tender of thee than thy kind have been."

I have been more cheerful today than I have been for some time. I feel impelled to pay a tribute to nature—something of the tranquil murmur and odor of the forest has crept into my soul and calmed its wearing restlessness.

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As I sat under the boughs of a great elm, I found myself inspecting little granules on the bark of the tree—lichens traced lovingly by our great Mother's finger. Do they not hold eloquent oracles? In them is no guile, no untruth, no bartering of finer feelings in pursuit of sordid aggrandisement. The exquisite details that mark each feature of their airy architecture cannot be obliterated even by the hand of him who wreaks vengeance upon the fairest creatures of his kind. Year by year, spire and minaret lift up their finely wrought proportions and from their belfrys swing the fairy bells in chimes unknown to men, but soft, and musical, and tender as the kiss of the spring winds that wakens them. So fair art thou, beloved Nature! And, for thy purity and peace might not one long to be as one of thy lowly children, nor rise again beyond the filial aspiration of these lichens?

So delicate thou art, so fair thy hue,
  Creation's handiwork in miniature,
Yet armed with subtle power to endure
  The tempest's shock or drink the ocean dew
Unharmed, throughout the lonely century.
  Mantling the breast of Nature with thy veil
Of beauty, and with marvelous coat of mail
  Guarding the face of earth, and rock, and tree!
Would, in my heart such strength and loveliness
  Might dwell, such courage to confront
The storms of fate, the bitter rain of tears,
  That I might view serene and passionless
All mortal woes, while ne'er could danger daunt
  My spirit through the darkness of my years.

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The woods are dearer to me than I can express, for have they not been constant amid a thousand vicissitudes? Yet, though I impersonate Nature, looking upon a flower with almost human tenderness, I never forget that greater than all glory *seen* is the intuition of the soul of man which *sees*.

To see thy lesson, Nature, is not Fate,
  But rather Love; nor is thy still decay
Only transition, but another state,
  Perchance, far lovelier. Each glad spring-day
This for my trusting heart contains alway
  The measure of a life, the mystery
Of earth's microcosm; the leaflet's play
  Is like a spirit's lyre, sweet and free,
Now breathing low, now stirred to godlike
    harmony.

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We should revere, not so much the forms of outward loveliness, as the eye which perceives what is fair. For we cannot say that beauty resides in a flower or a cloud or stream—since opinions differ respecting them—but rather that the love of the beau-

tiful, which through spiritual comparison includes the true and the good, is but an attribute of the human soul, the joint expression of the heart and intellect of man.

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Ignorance of this psychological truth leads some minds to "materialism," an offspring of rationalistic thought inferior to the pantheistic worship of the Greeks. To *explain* Deity is as unnecessary as it is, and forever must be, impossible; to *perceive* the manifestations of His goodness and love is within the scope of mental attainment. Yet always, if I see God in a flower, it is not the *flower* revealing itself to me, but I who interpret *it*. So far as creeds go, I am a devout Theist—that is all.

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Forgive me if I seem too spiritual-minded and court the muse. Such thoughts come to me unbidden on such a day. Such a clear spring day! The lake released from its wintry barriers glitters in the rich sunlight; the sky is a faint ethereal blue, tender even in immensity; and the carnival of the year has fairly begun.

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The renewal of nature's creative energy always awakens poetical and philosophical reflections in my mind. Every dead leaf, every withered blade of grass and fallen petal is metamorphosed in the womb of earth, transmuted by chemical agencies and rendered reproductive. The mantle of winter snows warms and protects them; April showers quicken the generative power through the imperceptible process of leaching; till at last, from the apparently inanimate debris, called into being by soft airs and genial sunshine, break forth hepatica and anemone to gladden us with their exquisite beauty. A miracle has been performed, heralded by song-sparrow and blue-bird, celebrated by woodland murmurs, and to the heart of man appealing with an irresistible sense of veneration. The dullest imagination is thrilled with unconscious recognition of something alien from and far above the incidents of daily life, yet, through the gracious benignity of fate, intimately related to the world of contemplative insight.

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The following poem came to me, as did the others, in a sudden thrill of inner music—a quick realization of the greatness and beauty of Nature, whom I love like a pagan.

But what insight—save such as was Wordsworth's and Shelley's—is subtle enough to catch the tones that fall from her enchanted lyre?

Again thou comest, Spring!
Like to a maiden stepping o'er the fields,
That blossom 'neath her footsteps, here again
Breathing sweet incense o'er a world of pain,
Where joy to sorrow yields
And grief to gladness,
Chasing each other in the mystic chain
Of passion's fitful madness.

Dost thou then know me, Spring?
Rememberest thou the love with which I wooed
Thy virgin heart within the forest shade
Along the murmuring streams and by the glade,
And many a solitude
Sacred with chaste emotion
And depths of hidden feeling all unsaid,
And measureless devotion?

O blithesome messenger!
There is, indeed, no miracle like thee.
All else is sad, but thou perennial joy
Bringest to mortal man. With thee to die
Were immortality
Of bliss, of hope unending,
Of rest this brooding care might ne'er destroy—
All with thy spirit blending.

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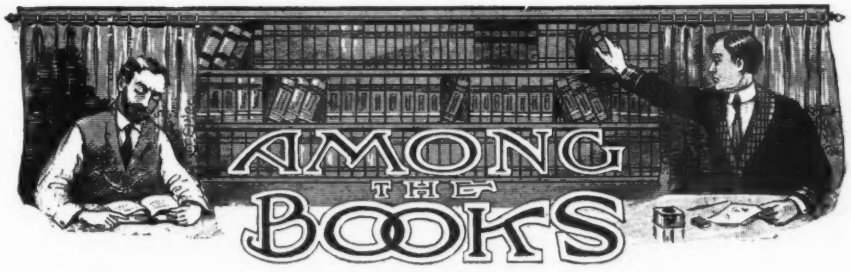
If we strive ever to be brave, we shall cease to care what others think of us. The opinion of others about ourselves ought not to count. Our own minds are the highest tribunals before which we can be brought. Those are the only courts that can weigh the mass of evidence. It is a pity that the conjunction of courage and wisdom is not a purer source of gratification. The presence of the one too often implies the necessity for the other. Wisdom involves a full measure of clear sight; a capacity to look around and ahead. Courage, on the other hand, is required to support such a bold preceding. Under the glare of the cold light of reason or the spell of a sage anticipation, it does not get a fair chance. A martyr would hardly consent to walk to the stake, were he not convinced of the immortality of the soul.




### "WELLCOME TROPICAL RESEARCH LABORATORY REPORT"

Fourth Report of the Tropical Research Laboratories at the Gordon Memorial College, Khartoum. Volume A—Medical. Andrew Balfour, M. D., Director. Published for the Department of Education, Sudan Government, Khartoum, by Baillière, Tindall & Cox, London. American Agents, Toga Publishing Company, New York City. Price $5.00 net.

This, the fourth report from this laboratory, is a large quarto of 404 pages, with 174 illustrations, a number in colors, and presents "the research and routine work of the bacteriological section together with papers on the work of the Sleeping Sickness and Kala-azar Commissions. The special features include a paper on the fallacies and puzzles met with in blood examinations in the tropics and elsewhere," which summarizes for the first time, in English at least, the difficulties and deceptive appearances with which the hematologist has to contend. "An extended research on fowl spirochetosis has demonstrated the important role played by the 'infective granule' in this disease." Other papers include records of work on trypanosomiasis, human spirochetosis, kala-azar, forms of cutaneous leishmaniasis, veldt-sore, diphtheria, human botrymycosis, veterinary diseases, etc." Details are also given of the scheme of sanitation now being successfully carried out in Khartoum.

The first report of this laboratory appeared in 1902. It, and the subsequent reports issued at intervals, form a grand record of a private enterprise that has undertaken a work of far-reaching importance—the study of the conditions that have interposed the barrier of death between the Dark Continent and the march of civilization. It would have been creditable to any civilized government to undertake such a work; it is far more creditable to the firm of private persons who have assumed the task and carried it out so long and so well.

Two young Americans, Mr. Wellcome (a Minnesota boy) and Mr. Burroughs, secured the control, outside the United States, of the goods of American firms, and upon this established themselves as partners in London. They had three assets; brains, money, and Americanism; and with these they proceeded to make themselves busy. When an English firm felt itself solidly established it demonstrated this fact by taking a full-page advertisement in *The Lancet* and in *The British Medical Journal*. Messrs. Burroughs & Wellcome took sixteen pages! Needless to say, John Bull began to sit up and take notice. In such an aggressive manner their campaign was carried on, until they occupied a place in the front rank. One instance of their sagacity was the recognition of at least one of the advantages accruing to the active principles of drug-plants. They took up the work of fitting out hunting, exploring and similar expeditions with medical supplies, where weight was important and useless dirt to be excluded. Emin Pasha and many a subsequent traveler have had occasion to appreciate the advantage of high efficacy in minute weight afforded by their little alkaloidal "tabloids."

The house of Burroughs & Wellcome has produced a few alkaloids and presented them in a state of purity that commands our admiration. But with that

correct commercial instinct that has won the firm a commanding position among English manufacturing chemical houses, they have refrained from advocating or supplying a general line of active principles. In the British prescription "Tr. Opii" still figures prominently, and morphine, potassium bromide, and chloral are tolerated novelties. The enterprise of a house is evidenced by presenting hydrastine and emetine—and there it stops till professional appreciation has had time to catch up.

The Wellcome Tropical Research Laboratories, Gordon Memorial College, Khartoum, were founded, in 1903, for the following purposes: (1) The study of tropical hygiene and of tropical disorders, both of man and beast, especially the communicable diseases peculiar to the Sudan; and to render assistance to the officers of health and to the clinics of the civil and military hospitals. (2) The study of plant diseases, both those due to fungi and other vegetable parasites and those caused by insects; the study of harmful and beneficial insects, especially of insects in their relation to tropical medicine. (3) To carry out investigations in connection with cases of poisoning, and to develop methods for the detection of the toxic agents which may be employed by the natives. (4) To carry out chemicals and bacteriological tests in connection with water, foodstuffs, and other sanitary questions. (5) To make analyses or assays of minerals, ores, fuels, and so forth. (6) To carry out investigations in connection with agricultural and forest products or operations, and of any material which may be of practical interest in the economic development of the Sudan.

The results of this work are published in the form of reports. The first three reports were issued in 1904, 1906 and 1908, respectively. The fourth, which brings the record up to 1911, is so large that it has been found necessary to issue it in two volumes—Volume A (medical), and Volume B (general science). The entire four reports, together with two reviews of recent advances in tropical medicine, are priced at $29.00. They form an unusually fine reference-library for physicians interested in tropical medicine. Messrs. Burroughs and Wellcome deserve the thanks of the entire medical profession for their valuable contributions to medical science.

## ANDERS AND BOSTON'S "DIAGNOSIS"

A Textbook of Medical Diagnosis. By James M. Anders, M. D., and L. Napoleon Boston, M. D. With 418 illustrations in the text, and 25 plates, 17 of them in color. Philadelphia: W. B. Saunders Company. 1911. Price, cloth, $6.00.

This textbook of diagnosis offers a most efficient guide for the study and recognition of pathologic conditions as they confront the practitioner. The authors have made use of every possible aid in their description of the methods to be followed and lay particular stress upon the importance of laboratory investigation, without, however, emphasizing the same unduly. "A broad conception of the subject of diagnosis," they say truly, "recognizes both clinical and laboratory methods and regards them as being equally important in the investigation of disease. While, in a given case, it may appear that the older clinical methods alone suffice for a correct diagnosis, the practical aid furnished from the laboratory renders the natural history and the clinical distinctions of the complaint in question more intelligible. Not only are knowledge and experience with chemical and biologic methods essential to the armamentarium of the broadly trained clinician, but he often finds the data available through such methods the only means of enabling him to reach an accurate conclusion, and in general they serve admirably as aids or checks."

In accordance with this opinion, the authors describe in detail the methods for the various proceedings in laboratory diagnosis, including the examination of blood, serum, and urine, and of pathologic secretions. The subject of blood pressure also has received commendable attention. Of great value are the numerous tables for differential diagnosis and the excellent illustrations. Among the latter the reviewer was interested in those showing the areas of referred pain in various affections.

We regret that so little attention was paid by the authors to the importance of intestinal autointoxication, in the clinical pictures, and to the danger of arriving at incorrect conclusions from an insufficient appreciation of this important factor. As a matter of form, the reviewer considers the term tubercul*ar*, for conditions due to the action of the tubercle bacillus, misapplied. This term should, for the sake of accurate terminology, be limited to the designation of pathologic conditions of nodular nature, while conditions due to tubercle bacilli should by preference be called tubercul*ous*. In this manner pathologic and etiologic differentiations could be readily expressed.

### WILCOX'S "MATERIA MEDICA AND PHARMACOLOGY"

Materia Medica and Pharmacy. By Reynold Webb Wilcox, M. D. Seventh Edition, Revised. Philadelphia: P. Blakiston's Son & Co. 1907. Price $2.50.

Pharmacology and Therapeutics. By Reynold Webb Wilcox, M. D. Seventh Edition, Revised. Philadelphia: P. Blakiston's Son & Co. 1907. Price $3.50.

Although these two books are of a date several years back, the reviewer takes pleasure in calling the attention of physicians to the excellent treatment by them of the important subjects of therapeutics and of materia medica. The author shows a remarkably broad conception of and understanding for this important part of the medical curriculum which at present so often is neglected and stands in apparent danger of being superseded by biologic methods of treatment. Not that we believe that the latter will ever entirely take the place of drug treatment; but, unfortunately, faulty methods of administration and observation and an obstinate retention of unreliable galenicals are fostering a therapeutic nihilism which results in the immediate disadvantage to the patient and in eventual harm to the medical profession.

Dr. Webb's books may well and profitably be studied and referred to, and they will be found beautifully supplemented by the author's work on "The Treatment of Disease," which was announced in CLINICAL MEDICINE for March, 1911, on page 346.

### MURPHY'S "SURGICAL CLINICS"

The Surgical Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Volume I, number I. Philadelphia: W. B. Saunders Company.

This, the first, number of the "Surgical Clinics of John B. Murphy, M. D." represents a new departure in medical publishing. It is a departure that must appeal at once to the medical man, because it is extremely practical clinical teaching. They are not students' clinics, but Dr. Murphy's well-known clinical talks at Mercy Hospital, for physicians only. The "Clinics" are published just as delivered by Dr. Murphy, being reported verbatim by an expert medical stenographer. In this way they retain all that individual force and charm characteristic of the clinical teaching of this distinguished surgeon.

These "Clinics" are to be issued in serial form, one number every other month (six numbers a year). Each number is to contain about 130 octavo pages, illustrated. The price (sold only by the year) has been fixed at $8.00 in paper binding, $12.00 in cloth.

### PUSEY'S "DERMATOLOGY"

The Principles and Practice of Dermatology. Designed for Students and Practitioners. By William Allen Pusey, M. D. With 5 plates, 1 in color, and 384 text illustrations. Second edition, revised. New York: D. Appleton & Co. 1911. Price $6.00.

This new edition of Pusey's well-known textbook embodies the recent additions to dermatologic knowledge, including an insert (pp. 584 a, b, c, d) on salvarsan. The subjects of radium, liquid air, and carbon dioxide, on pellagra, yaws, and others are more fully treated than hitherto, and the results of the experimental work on syphilis and of the Wasserman serum test have found their appreciation.

The book is well indexed, while its value to the student is increased by a fairly complete bibliography.

### "THE TAYLOR POCKET CASE-RECORD"

The Taylor Pocket Case-Record. By J. J. Taylor, M. D., 252 pages, tough bond paper; red limp leather. Published by The Medical Council Company, Forty-second and Chestnut streets, Philadelphia, Pa. Price $1.00.

The object of this book is to encourage more accurate observation and study of cases, by supplying a convenient form for condensed case records in pocket size, so arranged that the necessary data can be written down while the examination is being made. The blank for the first thorough examination diagnosis and treatment is followed by spaces for 16 subsequent visits. The book provides for 120 cases.

This is an unusually compact and efficient record-book; convenient, sufficiently complete for the general practitioner; and easy to keep, under the guidance of the syllabus. It will be found highly acceptable to physicians who prefer bound record-books to index-cards, and to such it is recommended cordially.

### HOXIE'S "SYMPTOMATIC AND REGIONAL THERAPEUTICS"

Symptomatic and Regional Therapeutics. By George Howard Hoxie, M. D. With 58 Illustrations in the Text. New York: D. Appleton & Co. 1910. Price $4.00.

This book contains the material collected for the course in general therapeutics recommended by the Committee on Curriculum of the American Medical Association —a recommendation adopted also by the Curriculum Committee of the Association of American Medical Colleges. As the course forms a transition from the laboratory to the clinic, more attention is given to the discussion of the principles underlying the various methods of treatment than to an elaboration of the relative merits of drugs.

The first portion is devoted to a consideration of symptoms and their relief, in which, however, the distinction between symptomatic and specific treatment is insisted upon. A chapter on localized inflammations is followed by several chapters considering regional therapeutics, and Part III contains notes on remedies which are principally taken from the Pharmacopeia.

### DAVIS' "BANDAGING"

The Principles and Practice of Bandaging. By Gwilym G. Davis, M. D. Third edition, revised. Illustrated from original drawings by the author. Philadelphia: P. Blakiston's Son & Co., 1911. Price $1.00.

This little textbook on bandaging is not only useful for the student but also offers to the practitioner many valuable hints and reminders on forms of bandages which are not frequently applied. While the proper application of the ordinary roller bandage is easily learned and remembered, there are many special injuries for which the most efficient application of bandage may have escaped our memory. The excellent illustrations in the book will serve—even without reference to the text, which, however, is clear and concise—to recall the technic in such unusual cases. The book is to be recommended to physicians.

### ALBRIGHT'S "GENERAL PRACTITIONER AS A SPECIALIST"

The General Practitioner as a Specialist. A treatise devoted to the consideration of medical specialties; a guide to the development of office practice. By Jacob Dissinger Albright, M. D. Fourth edition, revised, enlarged, and illustrated. Published by the author, 3228 North Broad Street, Philadelphia. 1911. Price $3.00.

Dr. Albright's book has been before the profession for a number of years and has met with such marked approval that we hardly need to recommend it further. Suffice it to say that the new edition has been prepared carefully and has received much new material. The volume affords, in a small space, a large amount of information of the kind that it is difficult to find in larger works of reference.


# ANSWERS TO QUERIES

ANSWERS TO QUERIES 5775 AND 5773.—"Rheumatoid Arthritis," "Lupus," and "Eczema". When a boy, mother taught us that a fool could find fault, but that it took a wise man to do better. In this case I ask you to be the judge.

The brother asks for a formula embracing potassium iodide and other substances which can be employed to advantage by rubbing into affected joints. Why rub the joints? They are less painful when quiet. Is it not important that all inflamed parts be kept at rest?

The broad white tongue denotes sodium sulphite, according to our homeopathic (panopathy?—Wiley) brethren. In my experience such a tongue denotes very feeble digestion, especially if it is indented on the edges by the teeth, also the urine is usually found hyperacid. Right here let me say that if the general practician will carry out the examination of the urine for just this much, i. e., specific gravity, albumin and (according to Harrower) indican and acidity, then correct what is found wrong, such conditions as this patient has suffered from will cease to exist.

In the joint affection, I would suggest that they be kept bathed continuously in an aqueous epsom-salt solution, to which 10 to 30 drops of carbolic acid to the pint has been added, or pure oil of wintergreen; no objection to methyl salicylate being added to the epsom-salt solution. This solution should be applied to the affected joints day and night until the pain ceases, and after the pain ceases the joints gently manipulated and the solution again applied. After the patient is able to be about this application may be applied on retiring at night. The joints are bandaged, then made wet with the solution, and over this a piece of "stork" sheeting is tied to keep if from evaporating. This keeps the joints moist and hot, with a perfect antiseptic solution—and more, you will find the products of inflammation will disappear to a large degree by absorption. In many rheumatic cases iron is too often neglected.

Regarding Query 5773. Case No. 1. "Lupus." Gather some of the pus or discharge and have an autogenous vaccine made from it. In the meantime, give internally arsenic iodide, 1-64 grain, and arsenic sulphide, 1-64 grain, two granules of each. They give better results if dissolved before swallowing. Give this dose every four to six waking hours. In solution and taken on an empty stomach they give better results and are less liable to irritate the mucosa. Nuclein solution should be used, and I prefer to use it intramuscularly, 20 drops or more every four hours. Begin with 5 drops of thiosinamin in some weak alcoholic solution, twice daily, and after three days increase one drop and continue to increase each day up to 10 or 15 drops, twice daily, unless some indications are present for stopping.

Locally, I should apply a bismuth-paste dressing, and this should extend from center to almost the edge, and the edges covered with Biebrich's scarlet-red salve, 10 percent. This percentage may require increasing or diminishing, according to the response of the ulcer. Change dressings twice daily.

Case No. 2, "Eczema." I have excellent results in all forms of eczema by adhering strictly to the "clean-out" principle. I am never satisfied with *one* examination of the urine; many times I make one every

day for several weeks, especially for indican, acidity, skatol, and urea. Locally, parts are bathed for at least one-half hour with a strong solution of epsom salt. Don't be afraid of bathing too much. Then dry thoroughly and apply carbenzol. Internal treatment must be regulated according to the indications as shown by examination of urine. Then see what our alkaloidal foster father (Abbott) has done for us.

I have had very remarkable results with nickel sulphate in two cases of tic douloureux.

T. V. DOTTERWEICH.

Ashland, O.

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# QUERIES

QUERY 5791.—"Blepharitis." W. B. S., Idaho, has been treating a case of blepharitis for months with poor results. The yellow oxide of mercury, solutions of argyrol, and so on, have been used. The patient has been told it would take a year to cure him and the doctor asks us to "suggest a treatment that will help things along."

Simple blepharitis (seborrhea of the lid border) and the more severe forms, blepharitis ulcerosa and tinea tarsæ, must be differentiated. Syphilitic blepharitis is sometimes encountered. In all cases it is essential that systemic disorders should be corrected. The refraction of the eye should be ascertained and abnormal conditions corrected with suitable glasses. Under such treatment ordinary hyperemia will often disappear, but soothing lotions may be used advantageously; a suitable vessel, to which is attached a rubber tube having at the lower end an arrangement similar to the "rose" upon a watering can, is filled with water at the temperature of 70° F. and held a short distance above the head, the small spray being allowed to play several minutes on the affected lids.

A weak solution of boric acid may be used and the addition of a small quantity of rose water or eau de cologne makes the irrigation more pleasant. For pain, simple salves (vaseline, almond oil or 1 percent ichthyol in vaseline) may be applied.

All crusts and scales should be removed by the use of an alkaline solution. An excellent formula is sodium bicarbonate or the biborate, 8 grains to the ounce; a 5-percent solution of glycerin is also recommended. Later, yellow oxide of mercury ointment (gr. 1 to the dram) or zinc ointment are of service. Graedel advises the application of sulphur and resorcin, 3 percent.

In all chronic cases, loose cilia should be extracted with the epilating forceps. Any small ulcerations should be touched with the mitigated stick or a solution of nitrate of silver—one part of a 1 : 100 solution in 30 of glycerin. We prefer mercury-bichloride solution in the severer forms. A boric-acid ointment, 10 grains to the ounce, or aristol, 15 to 50 grains to the ounce, will be found useful.

Maintain elimination and push the arsenates, preferably with nuclein. In some cases iron iodide will prove most useful. Do not overlook the possibility of a luetic taint.

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QUERY 5792.—"Sarcoma." D. S. R., Illinois, recently presented the clinical data which follow, and asked for therapeutic suggestions. A specimen of stomach-contents was also forwarded to our pathologist. No definite evidence of gastric carcinoma could be obtained. A moderate amount of yeast and many staphylococci were found.

"Mrs. B., age 64, has two sons and one daughter, all married. Passed menopause fifteen years ago. No miscarriages. No serious sickness during the last twenty-five years, except severe headache occasionally. Height, 5 feet, 3 inches; weight, about 115 pounds. Nervous temperament; black eyes and hair, clear complexion up to present illness.

"In August last she had a sudden attack of gastroenteritis, with dysentery. Re-

covery from this was somewhat tedious, and I question whether complete. In September another doctor (I was out of town) diagnosed tuberculosis. No tests were made. After about a week she began to vomit and have severe pain in the left hypochondrium. For a few days the vomited matter was mostly food, then it was mucus similar to that sent you. She was unable to take food of any kind and was fed per rectum up to five days ago. One and sometimes two hypodermics of morphine (1-4 grain) has been given daily. The nurse's record shows the temperature to have been subnormal almost all of the time, especially in the forenoon. Within the last ten days it has reached 99° F. several times.

"At this stage the other doctor said it was peptic ulcer, and although I was inclined to agree with him, I held my peace. There was a marked tumor in the left hypochondrium extending two inches below the ribs and from the midline three inches to the left. This region was exceedingly painful and pressure caused nausea and vomiting. The tumor seemed rather hard and possibly nodular, but because of the pain and shallow breathing it was impossible to say whether it moved during respiration or not. Percussion developed marked dulness behind and two inches to the left of the sternum, but the apex was displaced very little, if any. Nothing abnormal could be detected in the valve sounds. The tumor seems to be quite small at times and today occupies a position corresponding more closely to the gall-bladder and pylorus and does not seem to be nearly so tender except at the point of the ensiform. The patient has vomited no blood discernible to the eye nor voided any per rectum.

"Nutrient enemas were well retained up to a week ago. The bowels have been constipated; the urine (15 to 25 ounces during the twenty-four hours) contains 1 to 2 percent of albumin. No casts are found. Up to the 29th of last month she was listless and paid little attention to anyone unless urged, but since that time she is normal in that respect. There has been no swelling of the ankles or feet until the last week, and now it is but very slight. During the last ten days a marked cachexia has developed. For four or five days she has taken some ice-cream and a little tea. She has at no time had any difficulty in swallowing. Has had no headache. I believe it is carcinoma, but I am not sure that it primarily was of the stomach."

Careful consideration of the facts presented inclines us to believe that ere this reaches you the patient will have passed away or be *in extremis*. Whatever conditions obtain, it is evident that the terminal state has been reached and the only thing possible is to give relief from pain and delay the end. We believe that the disease is of a malignant character. It is just possible that the spleen is involved. The gastric lesion is probably secondary. Microscopical examination of the feces would unquestionably have revealed blood long ago.

If the patient is still living and you think it worth while, send specimens of feces and blood to our pathologist. If it is possible, institute an autopsy, and kindly report the findings. The omentum, we think, will be found involved. It is just possible, of course, that the patient is tuberculous, but as already stated, we strongly suspect malignancy. Under the circumstances, we refrain from making therapeutic suggestions.

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After the foregoing was written and in type, we were advised that this woman died, the Doctor inclosing half of a small mediastinal gland removed at the autopsy. He writes:

"With the exception of a very slight narrowing of the stomach in a transverse direction, that organ seemed to be normal although the walls were thin. The posterior mediastinum was crowded full of tumor-like bodies, which I took to be glandular, from the size of a small teacup down to the end of the thumb. The mass was firmly bound together and to the spinal column so tightly that it could not be lifted. It had the stomach crowded to or below the umbilicus and the liver was thinned and spread out so that the extreme left edge reached the left mid-axillary line."

Examination of the tissue proved the neoplasm to be a large round-cell sarcoma. Death was, of course, inevitable.

QUERY 5793.—"Rupture of Uterus During Version." C. B., Wisconsin, recently attended a primipara, presenting these features: "Face presentation, turning of child, head delivery, very slow. Result, dead child. Rallied nicely from chloroform anesthesia. Next morning felt weak. Very thirsty during night; restless feelings in limbs; no fever, pulse 120, respiration 22; abdomen bloated; some urine passed; no bowel movement. Second day, no fever; pulse 133, respiration 22; abdomen very much distended with gas; no bowel movement; urine passed. Gave soap-water enema every two hours, also saline purge, but nothing worked. Patient died at midnight." The Doctor further writes: "What caused this bloating and why did the enemata and saline laxative not work? I tried everything that is usually employed in such cases. Is version the correct procedure? I want information, as I have to treat another case of this kind. Would an operation on the second day have saved this woman?" In addition he asks: "Is there any difference between helenin (elecampane) and helianthus semines (sunflower)?"

Your patient, Doctor, died from rupture of the uterus. The bloating you speak of was not caused by gas, but evidenced a severe internal hemorrhage.

We do not quite understand one sentence in your letter. You say, "Case a primipara: face presentation; turning of child, head delivery." If version was done, how did you have the head delivery? There seems to be an error somewhere. An immediate operation might have saved the woman; the next day would have been too late.

It is not necessary, in most face presentations, to perform version. As you are aware, one face presentation occurs among about four hundred cases. Strangely enough, this abnormality is observed more frequently in France, Pinard noting one in 247 at the Maternité. The statistics of Guy's Hospital, London, show a proportion of one in 303 cases. The present writer, who was graduated from King's, saw three brow presentations during his term in the obstetric ward.

You will readily understand that maneuvers must be modified according to the exact position of the head. The child's back may be turned to the front or the back. You may have a first or a second face position. If you understand thoroughly the principles which govern the mechanism of a vertex presentation, you will have no difficulty in remembering the mechanism of a face presentation.

We have descent, extension, internal-rotation, flexion, and external-rotation delivery. Occasionally reverse rotation of the head occurs, the chin lying in the hollow of the sacrum. Marked molding of the head is observed in all such instances. In fact, such molding is necessary for spontaneous delivery.

Bear in mind, the expulsion of the fetus takes a long time, even when most favorable conditions obtain. The physician must remain in constant attendance, for if the chin rotates posteriorly, further progress of the child is absolutely impossible.

The great question arising in these cases is, Should every face presentation be changed to the vertex presentation or may we let it go without change? Naturally, to decide this problem effectively, the doctor and attendants should be familiar with the various methods with which a face presentation can be changed to the vertex one, that is, he must know how full flexion of the head can be secured. There are three procedures: flexion by external manipulation; flexion by combined external and internal manipulation, by the Baudelocque's or Playfair's method; and podalic version. For the manipulation see any modern work on obstetrics.

In cases seen early, Schatz's method—flexion by external manipulation—should be attempted. Should this fail and the chin is directed anteriorly, further interference is uncalled for, since the child will almost certainly be delivered; if, however, the chin is directed posteriorly, Baudelocque's or the Partridge method must be adopted and a vertex presentation be secured. If for any reason this is impossible or if, after securing a vertex presentation, face presentation recurs, external version must be done. Usually the face is

fixed in the brim before the nature of the presentation is recognized. In such cases, it is usually inadvisable to interfere, for in all probability delivery will occur spontaneously.

In all face presentations the friends should be warned that the labor will be tedious. There is a possibility of the child's being born dead or temporarily disfigured. The mortality of the fetuses has been estimated at from 8 to 13 percent.

As to the concluding question: Helenin is a camphoraceous body obtained by steam distillation from the root of inula helenium. The drug acts primarily upon the mucosa, especially on the respiratory organs, lymphatics and glands. Van Renterghem states that helenin increases the functional activity of these organs, liquefying and dissipating exudates. Large doses cause nausea and vomiting.

Helianthus annuus (sunflower) is an entirely different plant. Helianthus semines are, of course, the seeds of the sunflower. Sunflower seeds are diuretic and expectorant and have been used in pulmonary affections with considerable benefit. It is just possible that you are confounding helianthus annuus and helenium autumnale (common sneezewort, swamp sunflower, wild sunflower). This drug is tonic, diaphoretic, and errhine. It is very little used, though it has reputed value in the treatment of chills and fever.

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QUERY 5794.—"Calx Iodata in Pneumonia." P. P., California, asks us to express our opinion about calcidin in acute lobar pneumonia. He adds: "I buried a relative yesterday; cause of death, pneumonia. The young man went to bed on Tuesday eve, and died on Sunday. The patient was quite strong and healthy prior to this attack. I have been treating pneumonia along alkaloidal lines for the past fifteen years without a single death. In this particular case I exhibited calcidin in 4-grain doses every four hours.

"Treatment was as follows: Initial purge, followed by calcidin, 4 grains, and nuclein, 8 drops, every four hours. The defervescent compound granule, 1 1-2 every two hours for forty-eight hours. Then the 'trinity,' 1 1-2 granule at the same intervals for the next twenty-four hours. No results, patient becoming much weaker. Gave hypodermatically strychnine, gr. 1-40; atropine, gr. 1-200; digitalin, gr. 1-100. Had counsel at this time, who advised addition of adrenalin, 10 drops of the solution every half hour. I gave normal saline solution subcutaneously on Sunday at 10 a. m. Colonic flushings daily. General sponging and careful dieting throughout. The temperature ranged from 102° to 104° F., average 103° F. Pulse averaged 130. Respiration 40. Is calcidin a safe drug to give in acute lobar pneumonia?"

We regret extremely to learn of your sad misfortune and sympathize with you in your bereavement. Endeavoring to answer your specific question, we must say that we wish we had more exact information regarding the clinical conditions you had to contend with.

However, the term "pneumonia," after all, serves but to express a complex symptomatology. Before one can form an intelligent opinion, he must possess a comprehensive knowledge of the condition of the organs and of the body-chemistry preceding and during the attack. We note, of course, that you say the patient was "quite strong and healthy." It is just such individuals who succumb most readily to this disease. In this case, resistance was lacking, the medication for some reason failed to produce effect, or the toxemia was so profound as to overwhelm the individual. We take it that you had to deal with a double lobar pneumonia.

We fail to notice mention of the *hypodermic* use of nuclein. In pronounced cases, this agent should always be given hypodermically in 20- to 30-minim doses.

You write, "Treatment commenced with a purge, followed by calx iodata." Just how thoroughly was the intestinal canal emptied? Did you maintain subsequent therapeutic cleanliness with the sulphocarbolates? We are inclined to doubt the benefit of *colonic* flushings (with the necessary movement of the patient) in lobar pneumonia, although the lower bowel may be washed out, it is true. The defervescent compound should have been pushed

very boldly after thorough emptying of the intestinal canal, and small doses of atropine given as an alternant. Where the skin remains dry, pilocarpine is indicated; while, if the patient grows gradually weaker early in the disease, cactin must be used to support the heart, stimulants exhibited, and systemic antiseptics *pushed hard*.

It is in these desperate cases that the therapeutist finds himself compelled to "meet the conditions which obtain with the indicated remedy." As we have so often pointed out, there can be no fixed, definite treatment for "pneumonia." When certain well-known symptoms, and these alone are present, we can formulate a generally applicable treatment; but it is basal always, and must be modified to meet individual requirements. Personally, we have always hesitated to use adrenalin, some very unfortunate results having followed the employment of this agent.

In fulminant cases, especial care must be taken, and it is here that the addition of cactin to any medication suggests itself—the heart needing support, not "whipping." Atropine is of especial value later; and when exhaustion becomes evident, it should be pushed until slight redness of the skin appears, and then the effect maintained with cactin and strychnine, 1-64 of a grain of each, every three hours. Occasionally conditions arise which demand the prompt use of ammonium carbonate, and we have found it necessary to push sanguinarine and scillitin in alternation. Guaiacol, externally, we never omit. In fulminant cases, epsom-salt spongings give wonderful relief and aid defervescence. The main thing is, of course, to secure defervescence early, no matter how much drug we have to give.

Calcidin is often of value in pneumonia, but it cannot be regarded as essential. Of late, we have used nuguaiacol with advantage. Calcium is indicated, and guaiacol carbonate has proven of unquestionable service, but we do not give these drugs during the first forty-eight hours. There are more important conditions that have to be overcome.

We wish, Doctor, that you would carefully read the paragraphs on the treatment of lobar pneumonia, pleuropneumonia, and bronchopneumonia in Candler's "Everyday Diseases of Children." The pages devoted to treatment are worth special study. You will also be interested in Aylesworth's article, "Pneumonia and How to Treat It," which appeared in the December (1911) issue of CLINICAL MEDICINE. This article is followed by an excellent paper by Cox on the use of lobelia in this disease.

If you kept clinical records in this case, please send us full data. Throw all the light you can upon conditions as observed at your first visit and on to the end. State, if possible, just what reaction you secured from the medicines exhibited, and we shall be in a position to discuss the matter intelligently with you. Naturally, we must be defeated by the "grim rider on the white horse" once in a while, but regret that your first defeat should have cost the life of one so near and dear to you.

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QUERY 5795.—"Dough Dressings in Umbilical Hemorrhage." A. S. C., Kentucky, writes that an "infallible remedy for umbilical hemorrhage"—at least one which has never failed in his hands—is a stiff wheat dough applied under a snugly fitting bandage. "I have also checked," he states, "the severest hemorrhage from cuts of arms and legs with this dough. I published my experiences a few years ago in *The Journal* and in our state organ, but I see doctors are still letting children die when, in fact, they could be saved. I have been practising fifty years and ought to know what is an efficient remedy. Is there a better?"

Thank you, Doctor, for the suggestion. This method is not, however, unknown to us; we have seen it tried in one or two instances. In a certain form of umbilical hemorrhage it unquestionably proves efficacious, but where there is an abnormal condition of the vessels themselves, it will not avail. Especially is this the case in syphilitic or hemophiliac individuals. In Buehl's disease, deep ligation is the only rational procedure. The actual cautery occasionally saves life.

In less serious cases the application of a stiff dough will unquestionably prove use-

ful. Plaster-paris, properly applied, also often proves very satisfactory. Where we could use the paste, we should feel inclined to add adrenalin.

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QUERY 5796.—"Treatment of Neuralgia." C. R., New York, wants to know how best to treat neuralgia. To begin with, neuralgia is an unsatisfactory term. You must bear in mind that frequently—not always—the condition so designated is due to disturbances of the body-chemistry. In facial neuralgia, errors of refraction and possible astigmatism must be sought for and corrected. The teeth should receive attention, and gout, syphilis, anemia or a malarial toxemia be excluded or, if found, treated. Perfect hygienic conditions should be secured; sexual excesses, overwork, emotional strain and alcoholism avoided. Coffee and tobacco should be used very moderately, if at all.

The arsenates (preferably with nuclein), quinine hydroferrocyanide, and phosphates are indicated in anemia. Gelseminine alternated with hyoscine-morphine-cactin may also be used advantageously to control pain. Blisters, sinapism, acupuncture, and the actual cautery may be tried. Menthol, camphor, and chloral, equal parts, or menthyl salicylate may be rubbed over the painful area. In stubborn cases use aconitine, chloroform, and atropine in soap liniment. The galvanic current often is of service, the negative pole being placed near the nerve centers, the positive over the affected area.

Some success has been obtained in rebellious cases of tic by deep injections of alcohol directly over the nerve at its exit from the skull. In every case free elimination must, of course, be maintained, and the underlying acidemia, which usually exists, corrected. The urine should be examined at frequent intervals.

We have recently controlled severe facial neuralgias by eliminating freely, pushing gelsemin, aconitine, and quinine hydroferrocyanide internally, and rubbing methyl salicylate and guaiacol over the affected area. Compresses wrung out of a hot saturated solution of epsom salt were then applied. The high-frequency current (vacuum electrode) gives relief, as a rule, in fifteen minutes.

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QUERY 5797.—"Tabes Dorsalis. Amblyopia. Empyema." W. E. A., Ontario, requests brief recommendation for treatment and prognosis in the three cases as described below:

"1. Tabes dorsalis, with Charcot joint. Syphilis originated fifteen years ago. Says he was treated for 'soft' chancre, but admits six or seven weeks elapsed between exposure and development of the 'soft chancre.' This patient has all the clinical symptoms of a typical case of tabes dorsalis, with Charcot joint. He is forty years of age, father of quite a family, although the wife has had several miscarriages. It is the 'gastric crises,' or monthly attacks of vomiting, what brings this man to the doctor. There is not much pain, but vomiting is intense and persistent while it lasts. When it lets up, he feels 'right as a fiddle' again."

Unfortunately, Doctor, very little can be done for your tabetic patient. You do not state the condition of the joint. We presume it is the knee which is effected. Do not forget that suppuration sometimes develops and a hydrathrosis may exist. The age of the patient is against him. What about the family history, general physique, and so forth?

We should be inclined to place the man upon the antisyphilitic formulas, alternating the biniodide and protoiodide week and week about, at the same time pushing iridin and xanthoxylin to effect. Nuclein may advantageously be given in rather large doses once or twice daily; in some instances chromium sulphate has proven of real benefit. But we must have fuller clinical data before we can prescribe intelligently for the individual. Calx iodata is a reliable remedy—preferable in every way to potassium iodide.

To the joint itself apply compresses wrung out of a hot solution of epsom salt, and each night on retiring inunct euarol and guaiacol thoroughly. The crisis can usually be overcome by the administration of cannabin and atropine or of the combination of hyoscine, morphine, and cactin—

the modified formula. This writer obtained satisfactory results, in the most rebellious case he has treated, from resorcin, gr. 1-40; stovaine, gr. 1-50; atropine, gr. 1-250; delphinine, gr. 1-1000; given every half hour to relief, then one such dose every three hours.

Regulate the diet carefully and keep the alimentary tract thoroughly clean. The high arterial tension yields to a few minute doses of veratrine. High rectal irrigations are extremely beneficial, especially when crises are threatened.

"2. Amblyopia, due either to (reflex from) tapeworm or to tobacco. Patient had tapeworm years ago, stated that he still had one and saw 'bits' of it occasionally. I put him on male fern and castor oil and repeated the dose the same day, but did not get the worm. About a week later I put him on Osler's mixed treatment of male fern and pomegranate root, and though he passed several fragments of different sizes of a creamy color, I was inclined to take them for milk curds. He had been allowed a cup of milk a few hours before treatment, owing to the fasting he was undergoing. This patient has had autumnal diarrhea, and I am inclined to think that, because he once passed a few yards of tapeworm and later saw some milk curds occasionally, he imagines he still has the 'vermin' within him. In all probability he lost the entire worm during the last attack of diarrhea. He is a user of 'black strap' chewing tobacco, which he both chews and smokes, and has had the habit since twelve years of age. He is thirty-two years of age and a myope. In addition, his right eye lost one-half the field of vision about two years ago, but at that time he could discern one-half of a vis-a-vis; now, however, he can scarcely discern one-half of the brightest light. Still, under strychnine and Donovan's solution, he says, his eyesight is improving a little."

In this case of amblyopia get rid of the tapeworm (if one really is there) and cut off the tobacco. This is essential. Give strychnine arsenate, gr. 1-64 three times a day. Keep the skin thoroughly active with epsom-salt sponge-baths, and maintain intestinal elimination.

"3. Empyema. This patient has had tuberculosis, but I believe he has outgrown it. He is now up to the top notch in weight, eats like a horse, and is strong as a lion. The patient was seen first about a year ago, when he was under another man. On Christmas day I had to operate again and took away about a quart of pus, which must have got walled off, as the old opening was still open. Under surgical treatment, frequent dressings, syringings, etc., it has been doing well, but has not closed yet. I put the patient on yeast, which he takes plentifully, in lieu of nuclein, he not being wealthy enough to buy this article in the quantities necessary. He tells me the pus is diminishing in quantity. He is on calcium sulphide, also. He was 100 pounds in weight six months ago. Tubercle bacilli are present in his sputum. He now weighs 168 pounds."

To this man with empyema give nuclein, 10 to 15 minims, hypodermically, each day. Also, by mouth, give echinacea, 1 or 2 grains every three hours; nuclein, 10 drops; guaiacol carbonate, 1 grain; calx iodata, 1-2 grain, every four hours. Continue the present local treatment, or after cleansing apply freely thuja and echinacea, equal parts.

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QUERY 5798.—"Interrelation of the Ductless Glands." P. O. L., Montana, asks as to what is known about the relations that may subsist between the glands with internal secretions. This is, indeed, too large a proposition to be handled in this department. This whole question remains, though rapid progress is being made. For the present, we can do no better than to advise anyone interested to a monograph entitled, "Internal Secretions from a Physiological and Therapeutical Standpoint," published, two years ago, by Prof. Isaac Ott, of Philadelphia. (E. D. Vogel, Easton, Pa.). Dr. Ott, here, has collected in condensed form, all data published by competent investigators of the extremely important problem of the internal secretions, with the addition of the results of his personal researches. The future of medicine lies in an understanding of the mechanism of the physiologic factors.

## MOTHERHOOD

*THERE is no sentiment more sacred than the love of mother for child; no force more potent than the love of child for mother; no calling more nearly divine than that of maternity.*